

SUBSTITUTE SHEET

SB

FIG. 1

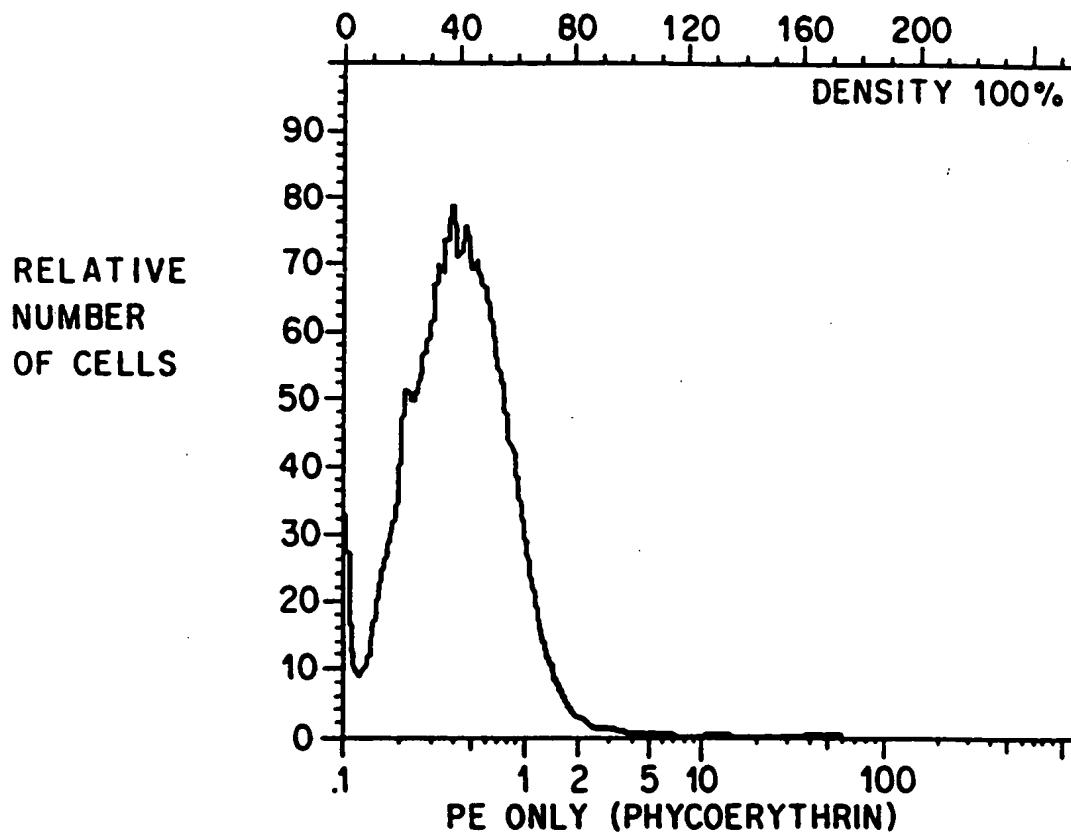
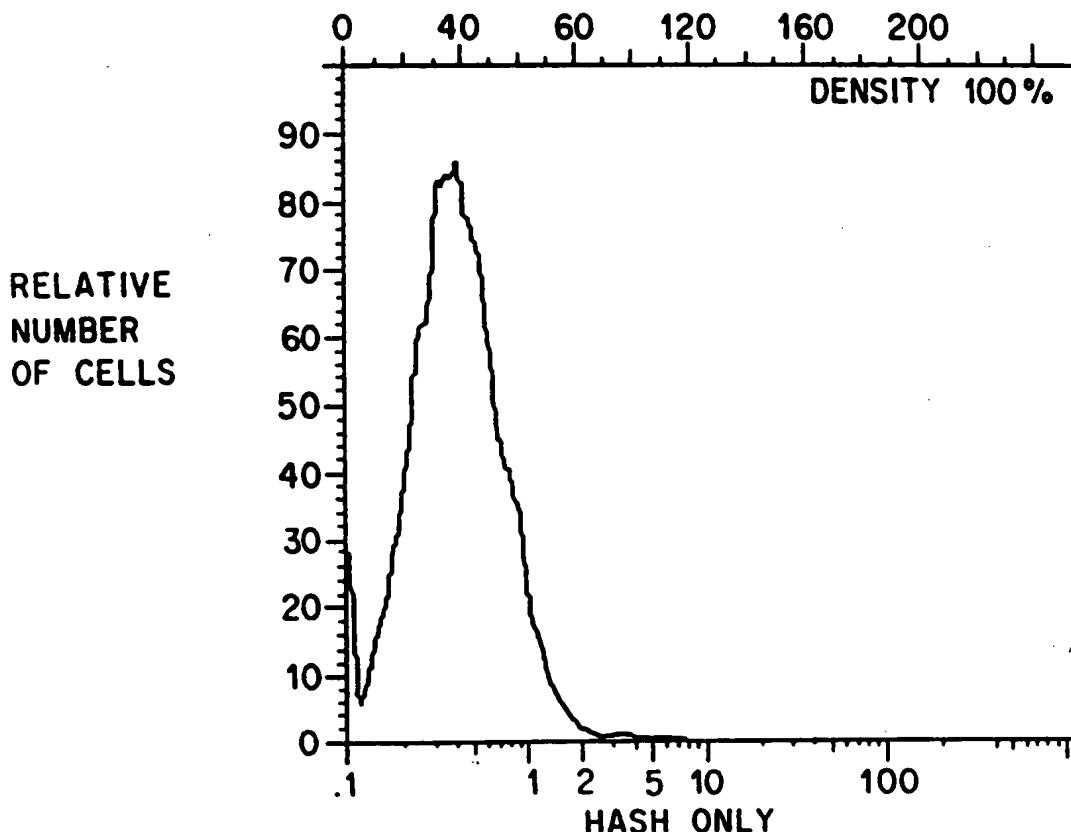


FIG. 2A

FIG. 2B  
SUBSTITUTE SHEET

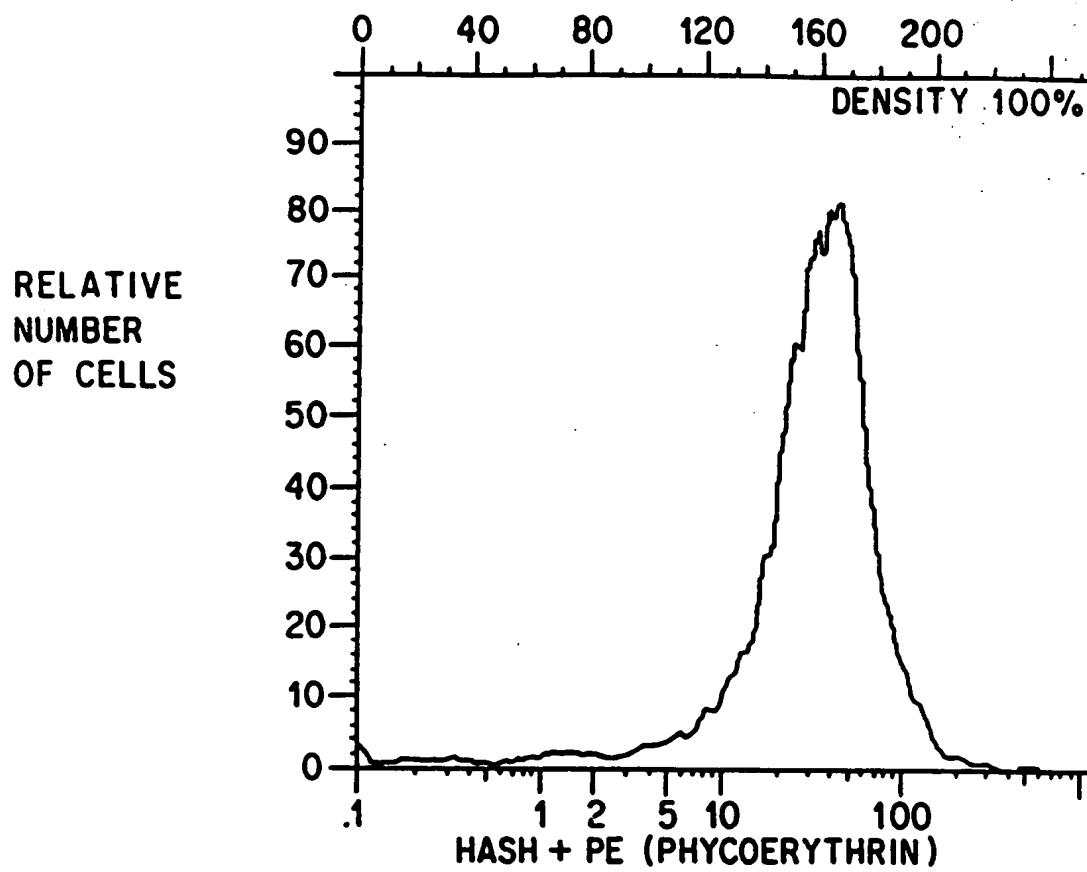


FIG. 2C

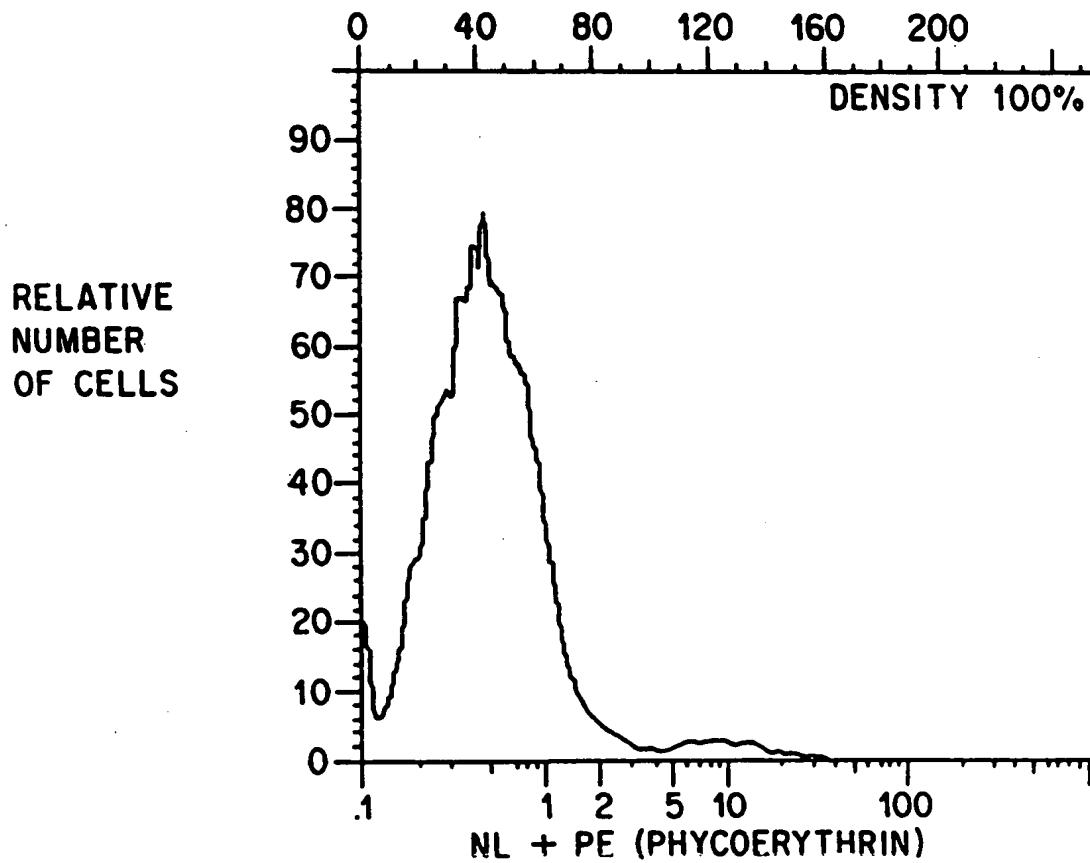


FIG. 2D

HASH + PE  
(PHYCOERYTHRIN)

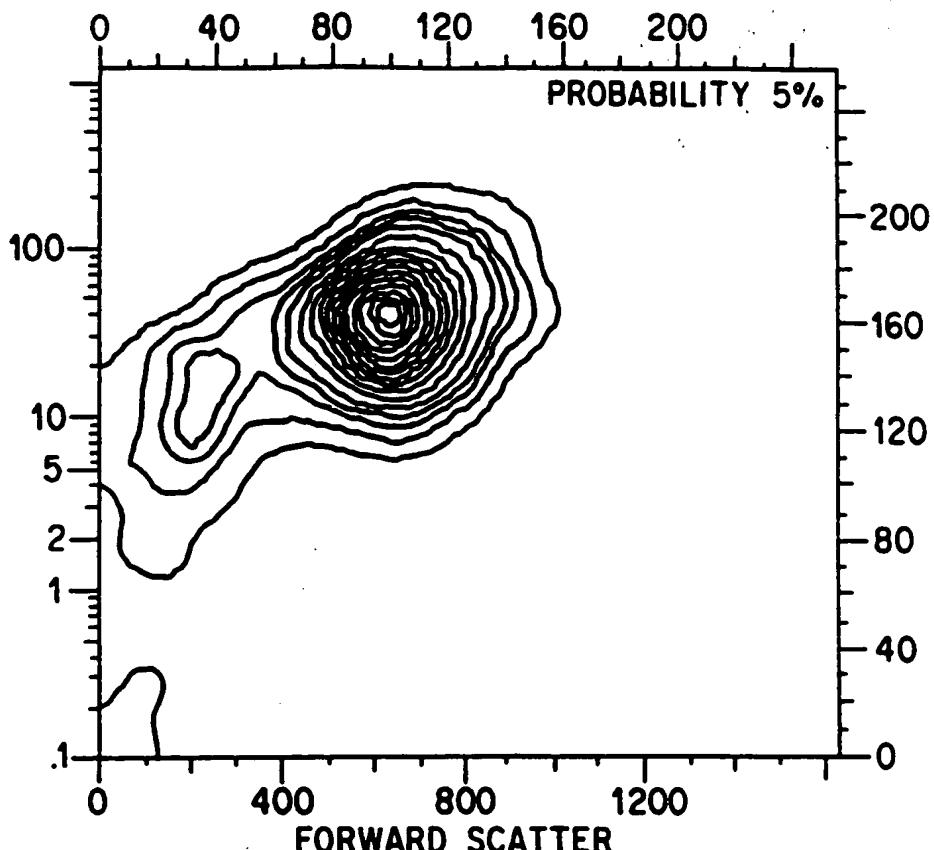
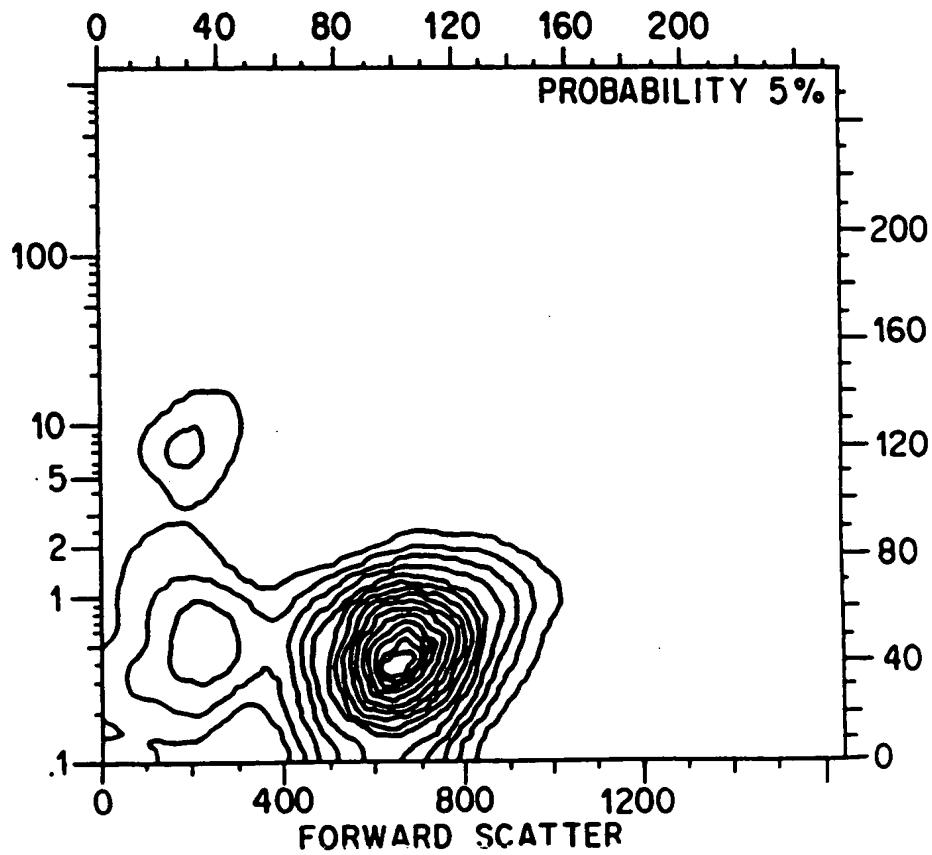


FIG. 2E

NL + PE  
(PHYCOERYTHRIN)



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FIG. 2F

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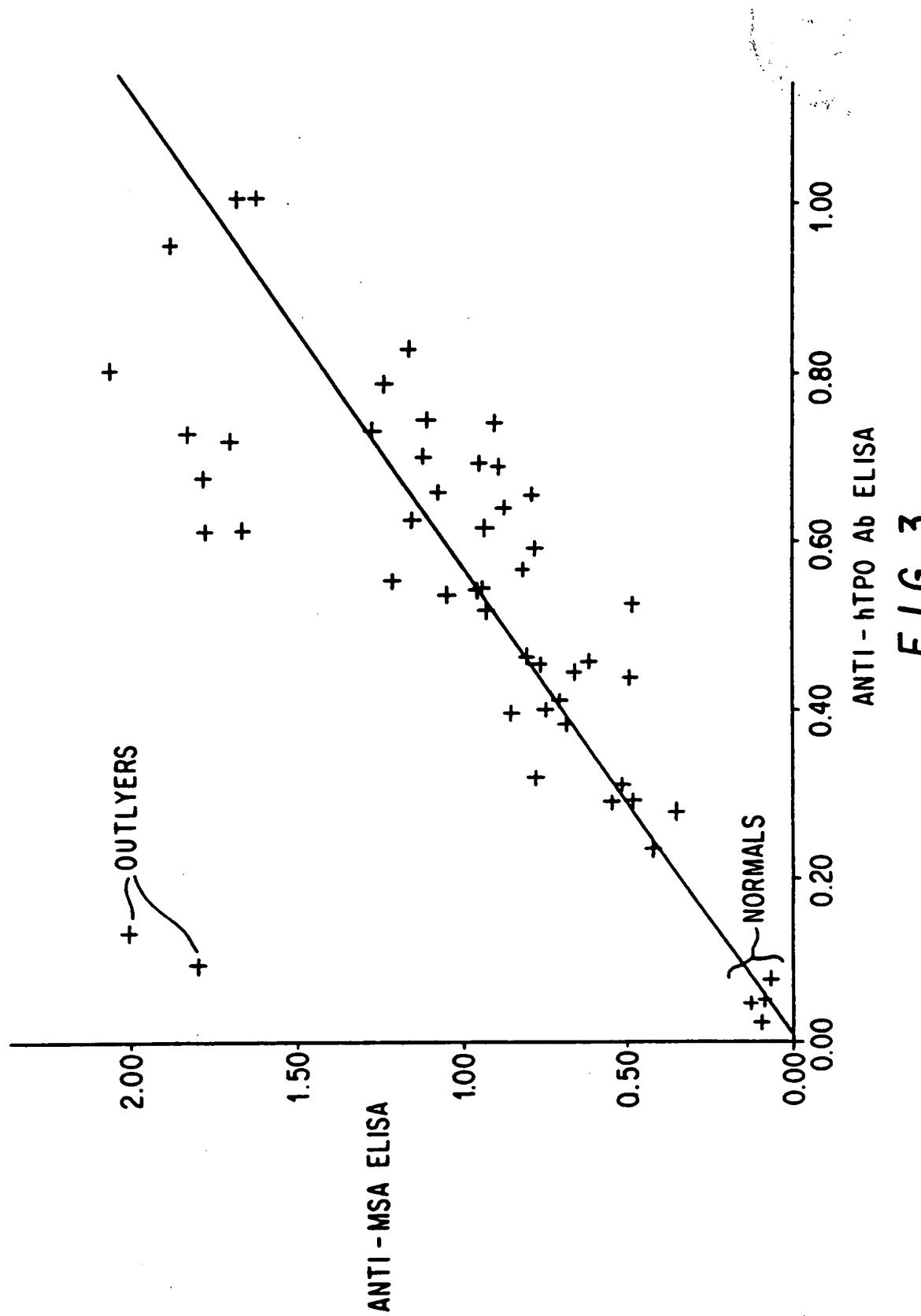
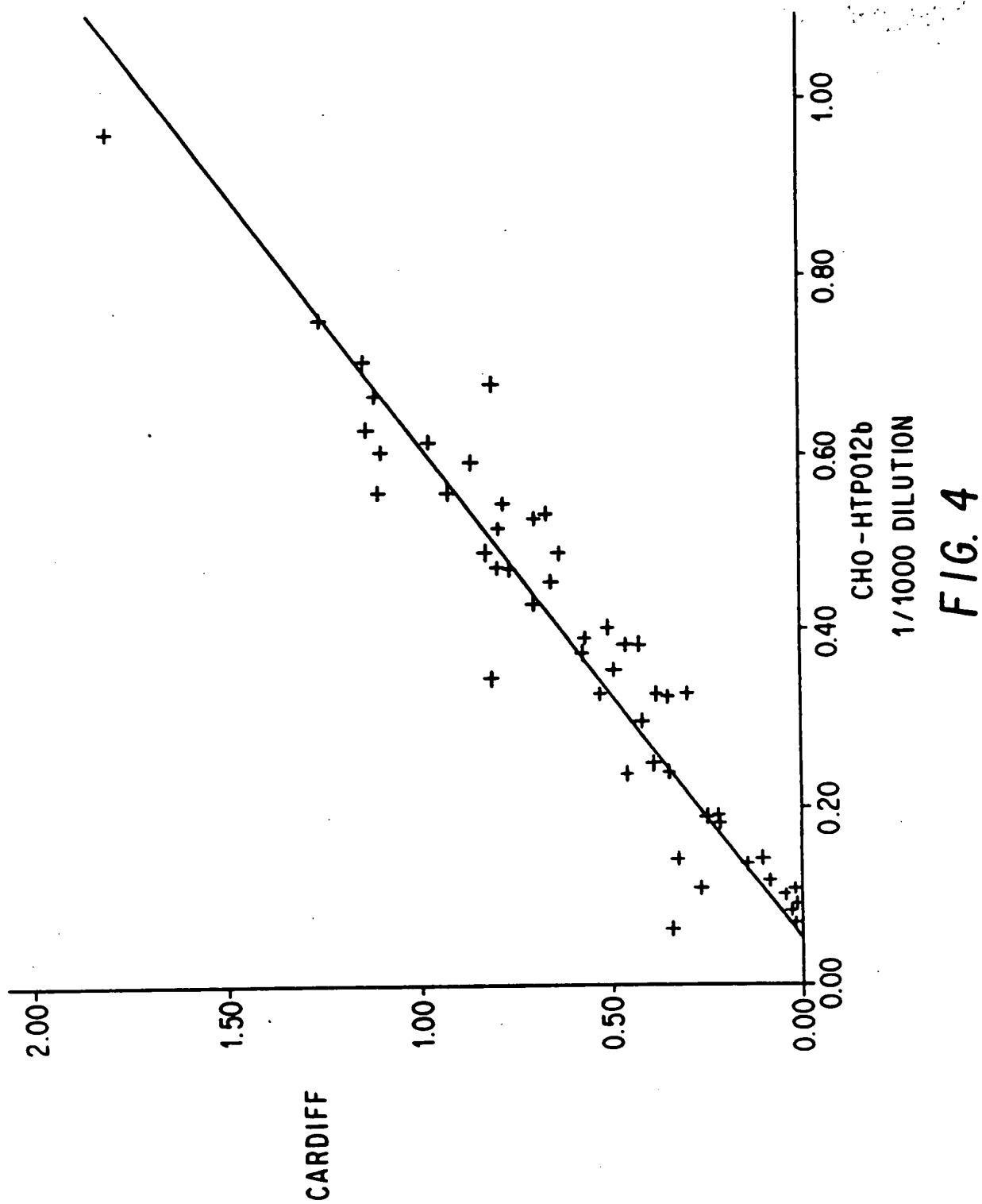


FIG. 3

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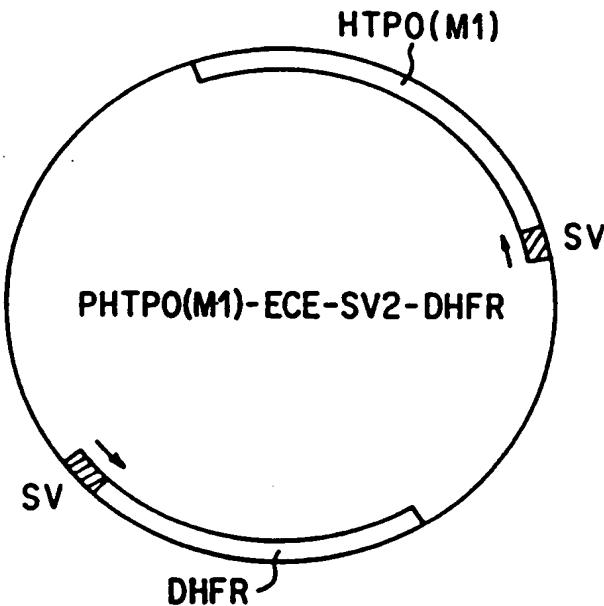


FIG. 8

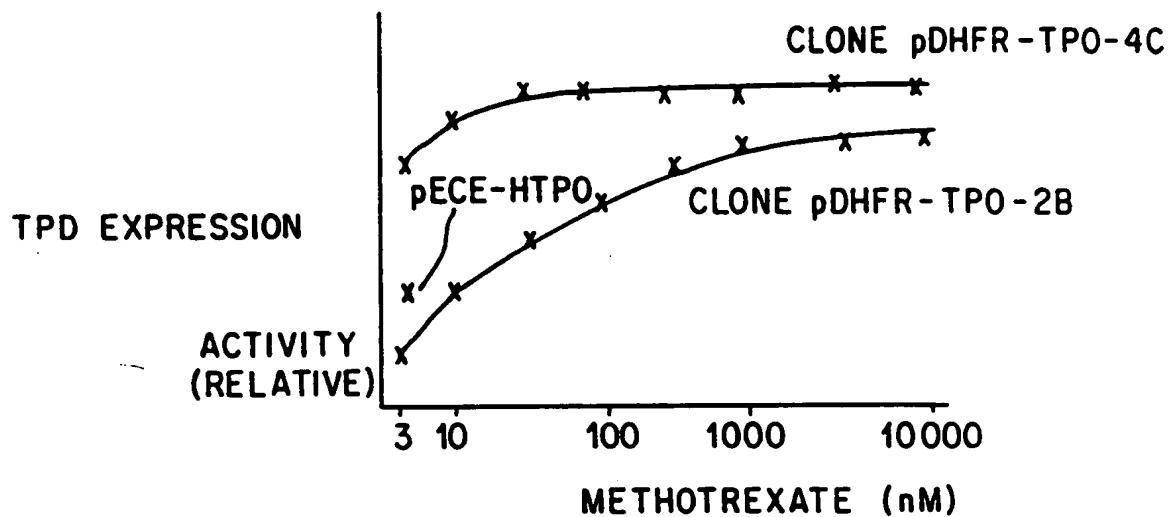


FIG. 5

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2611

AGG CCT CCT CGG GTG ACT TGG ATC ICC ATG TAG CTG GCT GCT CTG ATC G pHTPD-BS

2662

Eco RI

Stop Stop

AGG CCT CCT CGG GTG ACT TGA ATT CCC ATG TAG CTG GCT GCT CTG ATC G pHTPD(M1)-BS

FIG. 6

**SUBSTITUTE SHEET**

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27	54
GAG GCA ATT GAG GCG CCC ATT TCA GAA GAG TTA CAG CCG TGA AAA TTA CTC AGC	
81	108
AGT GCA GTT GGC TGA GAA GAG GAA AAA AGA ATG AGA GCG CTG GCT GTG CTG TCT	
MET Arg Ala Leu Ala Val Leu Ser	
135	162
GTC ACG CTG GTT ATG GCC TGC ACA GAA GCC TTC TTC CCC TTC ATC TCG AGA GGG	
Val Thr Leu Val Met Ala Cys Thr Glu Ala Phe Phe Pro Phe Ile Ser Arg Gly	
189	216
AAA GAA CTC CTT TGG GGA AAG CCT GAG GAG TCT CGT GTC TCT AGC GTC TTG GAG	
Lys Glu Leu Leu Trp Gly Lys Pro Glu Glu Ser Arg Val Ser Ser Val Leu Glu	
243	270
GAA AGC AAG CGC CTG GTG GAC ACC GCC ATG TAC GCC ACG ATG CAG AGA AAC CTC	
Glu Ser Lys Arg Leu Val Asp Thr Ala Met Tyr Ala Thr Met Gln Arg Asn Leu	
297	324
AAG AAA AGA GGA ATC CTT TCT GGA GCT CAG CTT CTG TCT TTT TCC AAA CTT CCT	
Lys Lys Arg Gly Ile Leu Ser Gly Ala Gln Leu Leu Ser Phe Ser Lys Leu Pro	
351	378
GAG CCA ACA AGC GGA GTG ATT GCC CGA GCA GCA GAG ATA ATG GAA ACA TCA ATA	
Glu Pro Thr Ser Gly Val Ile Ala Arg Ala Ala Glu Ile Met Glu Thr Ser Ile	
405	432
CAA GCG ATG AAA AGA AAA GTC AAC CTG AAA ACT CAA CAA TCA CAG CAT CCA ACG	
Gln Ala Met Lys Arg Lys Val Asn Leu Lys Thr Gln Gln Ser Gln His Pro Thr	
459	486
GAT GCT TTA TCA GAA GAT CTG CTG AGC ATC ATT GCA AAC ATG TCT GGA TGT CTC	
Asp Ala Leu Ser Glu Asp Leu Leu Ser Ile Ile Ala Asn Met Ser Gly Cys Leu	
*	

**FIG. 7A****SUBSTITUTE SHEET**

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513 540  
CCT TAC ATG CTG CCC CCA AAA TGC CCA AAC ACT TGC CTG GCG AAC AAA TAC AGG  
Pro Tyr Met Leu Pro Pro Lys Cys Pro Asn Thr Cys Leu Ala Asn Lys Tyr Arg

567 594  
CCC ATC ACA GGA GCT TGC AAC AAC AGA GAC CAC CCC AGA TGG GGC GCC TCC AAC  
Pro Ile Thr Gly Ala Cys Asn Asn Arg Asp His Pro Arg Trp Gly Ala Ser Asn

621 648  
ACG GCC CTG GCA CGA TGG CTC CCT CCA GTC TAT GAG GAC GGC TTC AGT CAG CCC  
Thr Ala Leu Ala Arg Trp Leu Pro Pro Val Tyr Glu Asp Gly Phe Ser Gln Pro

675 702  
CGA GGC TGG AAC CCC GGC TTC TTG TAC AAC GGG TTC CCA CTG CCC CCG GTC CGG  
Arg Gly Trp Asn Pro Gly Phe Leu Tyr Asn Gly Phe Pro Leu Pro Pro Val Arg

729 756  
GAG GTG ACA AGA CAT GTC ATT CAA GTT TCA AAT GAG GTT GTC ACA GAT GAT GAC  
Glu Val Thr Arg His Val Ile Gln Val Ser Asn Glu Val Val Thr Asp Asp Asp

783 810  
CGC TAT TCT GAC CTC CTG ATG GCA TGG GGA CAA TAC ATC GAC CAC GAC ATC GCG  
Arg Tyr Ser Asp Leu Leu MET Ala Trp Gly Gln Tyr Ile Asp His Asp Ile Ala

837 864  
TTC ACA CCA CAG AGC ACC AGC AAA GCT GCC TTC GGG GGA GGG TCT GAC TGC CAG  
Phe Thr Pro Gln Ser Thr Ser Lys Ala Ala Phe Gly Gly Ser Asp Cys Gln

891 918  
ATG ACT TGT GAG AAC CAA AAC CCA TGT TTT CCC ATA CAA CTC CCG GAG GAG GCC  
Met Thr Cys Glu Asn Gln Asn Pro Cys Phe Pro Ile Gln Leu Pro Glu Glu Ala

945 972  
CGG CCG GCC GCG GGC ACC GCC TGT CTG CCC TTC TAC CGC TCT TCG GCC GCC TGC  
Arg Pro Ala Ala Gly Thr Ala Cys Leu Pro Phe Tyr Arg Ser Ser Ala Ala Cys

**FIG. 7B****SUBSTITUTE SHEET**

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1053 1080  
CAG CAG ATG AAC GGG TTG ACC TCG TTC CTG GAC GCG TCC ACC GTG TAT GGC AGC  
Gln Gln Met Asn Gly Leu Thr Ser Phe Leu Asp Ala Ser Thr Val Tyr Gly Ser

1107 1134  
TCC CCG GCC CTA GAG AGG CAG CTG CGG AAC TGG ACC AGT GCC GAA GGG CTG CTC  
Ser Pro Ala Leu Glu Arg Gln Leu Arg Asn Trp Thr Ser Ala Glu Gly Leu Leu

1161 1188  
CGC GTC CAC GGC CGC CTC CGG GAC TCC GGC CGC GCC TAC CTG CCC TTC GTG CCG  
Arg Val His Gly Arg Leu Arg Asp Ser Gly Arg Ala Tyr Leu Pro Phe Val Pro

1215 1242  
CCA CGC GCG CCT GCG GCC TGT GCG CCC GAG CCC GGC AAC CCC GGA GAG ACC CGC  
Pro Arg Ala Pro Ala Ala Cys Ala Pro Glu Pro Gly Asn Pro Gly Glu Thr Arg

1269 1296  
GGG CCC TGC TTC CTG GCC GGA GAC GGC CGC GCC AGC GAG GTC CCC TCC CTG ACG  
Gly Pro Cys Phe Leu Ala Gly Asp Gly Arg Ala Ser Glu Val Pro Ser Leu Thr

1323 1350  
GCA CTG CAC ACG CTG TGG CTG CGC GAG CAC AAC CGC CTG GCC GCG GCG CTC AAG  
Ala Leu His Thr Ley Trp Leu Arg Glu His Asn Arg Leu Ala Ala Ala Leu Lys

1377 1404  
GCC CTC AAT GCG CAC TGG AGC GCG GAC GCC GTG TAC CAG GAG GCG CGC AAG GTC  
Ala Leu Asn Ala His Trp Ser Ala Asp Ala Val Tyr Gln Glu Ala Arg Lys Val

1431 1458  
GTG GGC GCT CTG CAC CAG ATC ATC ACC CTG AGG GAT TAC ATC CCC AGG ATC CTG  
Val Gly Ala Leu His Gln Ile Ile Thr Leu Arg Asp Tyr Ile Pro Arg Ile Leu

**FIG. 7C**

## **SUBSTITUTE SHEET**

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1485 1512

GGA CCC GAG GCC TTC CAG CAG TAC GTG GGT CCC TAT GAA GGC TAT GAC TCC ACC  
Gly Pro Glu Ala Phe Gln Gln Tyr Val Gly Pro Tyr Glu Gly Tyr Asp Ser Thr

1539 1566

GCC AAC CCC ACT GTG TCC AAC GTG TTC TCC ACA GCC GCC TTC CGC TTC GGC CAT  
Ala Asn Pro Thr Val Ser Asn Val Phe Ser Thr Ala Ala Phe Arg Phe Gly His  
\*

1593 1620

GCC ACG ATC CAC CCG CTG GTG AGG AGG CTG GAC GCC AGC TTC CAG GAG CAC CCC  
Ala Thr Ile His Pro Leu Val Arg Arg Leu Asp Ala Ser Phe Gln Glu His Pro

1647 1674

GAC CTG CCC GGG CTG TGG CTG CAC CAG GCT TTC TTC AGC CCA TGG ACA TTA CTC  
Asp Leu Pro Gly Leu Trp Leu His Gln Ala Phe Phe Ser Pro Trp Thr Leu Leu

1701 1728

CGT GGA GGT GGT TTG GAC CCA CTA ATA CGA GGC CTT CTT GCA AGA CCA GCC AAA  
Arg Gly Gly Leu Asp Pro Leu Ile Arg Gly Leu Leu Ala Arg Pro Ala Lys

1755 1782

CTG CAG GTG CAG GAT CAG CTG ATG AAC GAG GAG CTG ACG GAA AGG CTC TTT GTG  
Leu Gln Val Gln Asp Gln Leu Met Asn Glu Glu Leu Thr Glu Arg Leu Phe Val

1809 1836

CTG TCC AAT TCC AGC ACC TTG GAT CTG GCG TCC ATC AAC CTG CAG AGG GGC CGG  
Leu Ser Asn Ser Ser Thr Leu Asp Leu Ala Ser Ile Asn Leu Gln Arg Gly Arg  
\*

1863 1890

GAC CAC GGG CTG CCA GGT TAC AAT GAG TGG AGG GAG TTC TGC GGC CTG CCT CGC  
Asp His Gly Leu Pro Gly Tyr Asn Glu Trp Arg Glu Phe Cys Gly Leu Pro Arg

1917 1944

CTG GAG ACC CCC GCT GAC CTG AGC ACA GCC ATC GCC AGC AGG AGC GTG GCC GAC  
Leu Glu Thr Pro Ala Asp Leu Ser Thr Ala Ile Ala Ser Arg Ser Val Ala Asp

**FIG. 7D**

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1971	1998
AAG ATC CTG GAC TTG TAC AAG CAT CCT GAC AAC ATC GAT GTC TGG CTG GGA GGC	
Lys Ile Leu Asp Leu Tyr Lys His Pro Asp Asn Ile Asp Val Trp Leu Gly Gly	
2025	2052
TTA GCT GAA AAC TTC CTC CCC AGG GCT CGG ACA GGG CCC CTG TTT GCC TGT CTC	
Leu Ala Glu Asn Phe Leu Pro Arg Ala Arg Thr Gly Pro Leu Phe Ala Cys Leu	
2079	2106
ATT GGG AAG CAG ATG AAG GCT CTG CGG GAC GGT GAC TGG TTT TGG TGG GAG AAC	
Ile Gly Lys Gln Met Lys Ala Leu Arg Asp Trp Phe Trp Trp Glu Asn	
2133	2160
AGC CAC GTC TTC ACG GAT GCA CAG AGG CGT GAG CTG GAG AAG CAC TCC CTG TCT	
Ser His Val Phe Thr Asp Ala Gln Arg Arg Glu Leu Glu Lys His Ser Leu Ser	
2187	2214
CGG GTC ATC TGT GAC AAC ACT GGC CTC ACC AGG GTG CCC ATG GAT GCC TTC CAA	
Arg Val Ile Cys Asp Asn Thr Gly Leu Thr Arg Val Pro Met Asp Ala Phe Gln	
2241	2268
GTC GGC AAA TTC CCC GAA GAC TTT GAG TCT TGT GAC AGC ATC ACT GGC ATG AAC	
Val Gly Lys Phe Pro Glu Asp Phe Glu Ser Cys Asp Ser Ile Thr Gly Met Asn	
2295	2322
CTG GAG GCC TGG AGG GAA ACC TTT CCT CAA GAC GAC AAG TGT GGC TTC CCA GAG	
Leu Glu Ala Trp Arg Glu Thr Phe Pro Gln Asp Asp Lys Cys Gly Phe Pro Glu	
2349	2376
AGC GTG GAG AAT GGG GAC TTT GTG CAC TGT GAG GAG TCT GGG AGG CGC GTG CTG	
Ser Val Glu Asn Gly Asp Phe Val His Cys Glu Glu Ser Gly Arg Arg Val Leu	
2403	2430
GTG TAT TCC TGC CGG CAC GGG TAT GAG CTC CAA GGC CGG GAG CAG CTC ACT TGC	
Val Tyr Ser Cys Arg His Gly Tyr Glu Leu Gln Gly Arg Glu Gln Leu Thr Cys	
2457	2484
ACC CAG GAA GGA TGG GAT TTC CAG CCT CCC CTC TGC AAA GAT GTG AAC GAG TGT	
Thr Gln Glu Gly Trp Asp Phe Gln Pro Pro Leu Cys Lys Asp Val Asn Glu Cys	

**FIG. 7E****SUBSTITUTE SHEET**

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2511

2538

GCA GAC GGT GCC CAC CCC CCC TGC CAC GCC TGT GCG AGG TGC AGA AAC ACC AAA  
 Ala Asp Gly Ala His Pro Pro Cys His Ala Ser Ala Arg Cys Arg Asn Thr Lys

2565

2592

GGC GGC TTC CAG TGT CTC TGC GCG GAC CCC TAC GAG TTA GGA GAC GAT GGG AGA  
 Gly Gly Phe Gln Cys Leu Cys Ala Asp Pro Tyr Glu Leu Gly Asp Asp Gly Arg

2619

2646

ACC TGC GTA GAC TCC GGG AGG CTC CCT CGG GTG ACT TGG ATC TCC ATG TCG CTG  
 Thr Cys Val Asp Ser Gly Arg Leu Pro Arg Val Thr Trp Ile Ser Met Ser Leu

2673

2700

GCT GCT CTG CTG ATC GGA GGC TTC GCA GGT CTC ACC TCG ACG GTG ATT TGC AGG  
 Ala Ala Leu Leu Ile Gly Gly Phe Ala Gly Leu Thr Ser Thr Val Ile Cys Arg

2727

2754

TGG ACA CGC ACT GGC ACT AAA TCC ACA CTG CCC ATC TCG GAG ACA GGC GGA GGA  
 Trp Thr Arg Thr Gly Thr Lys Ser Thr Leu Pro Ile Ser Glu Thr Gly Gly

2781

2808

ACT CCC GAG CTG AGA TGC GGA AAG CAC CAG GCC GTA GGG ACC TCA CCG CAG CGG  
 Thr Pro Glu Leu Arg Cys Gly Lys His Gln Ala Val Gly Thr Ser Pro Gln Arg

2835

2862

GCC GCA GCT CAG GAC TCG GAG CAG GAG AGT GCT GGG ATG GAA GGC CGG GAT ACT  
 Ala Ala Ala Gln Asp Ser Glu Gln Glu Ser Ala Gly Met Glu Gly Arg Asp Thr

2889

2916

CAC AGG CTG CCG AGA GCC CTC TGA GGG CAA AGT GGC AGG ACA CTG CAG AAC AGC  
 His Arg Leu Pro Arg Ala Leu ^^^

2943

2970

TTC ATG TTC CCA AAA TCA CCG TAC GAC TCT TTT CCA AAC ACA GGC AAA TCG GAA

2997

3024

ATC AGC AGG ACG ACT GTT TTC CCA ACA CGG GTA AAT CTA GTA CCA TGT CGT AGT

3051

TAC TCT CAG GCA TGG ATG AAT AAA TGT TAT AGC TGC AAA AAA AAA AAA AAA  
 ^^^ ^^^

**FIG. 7F****SUBSTITUTE SHEET**

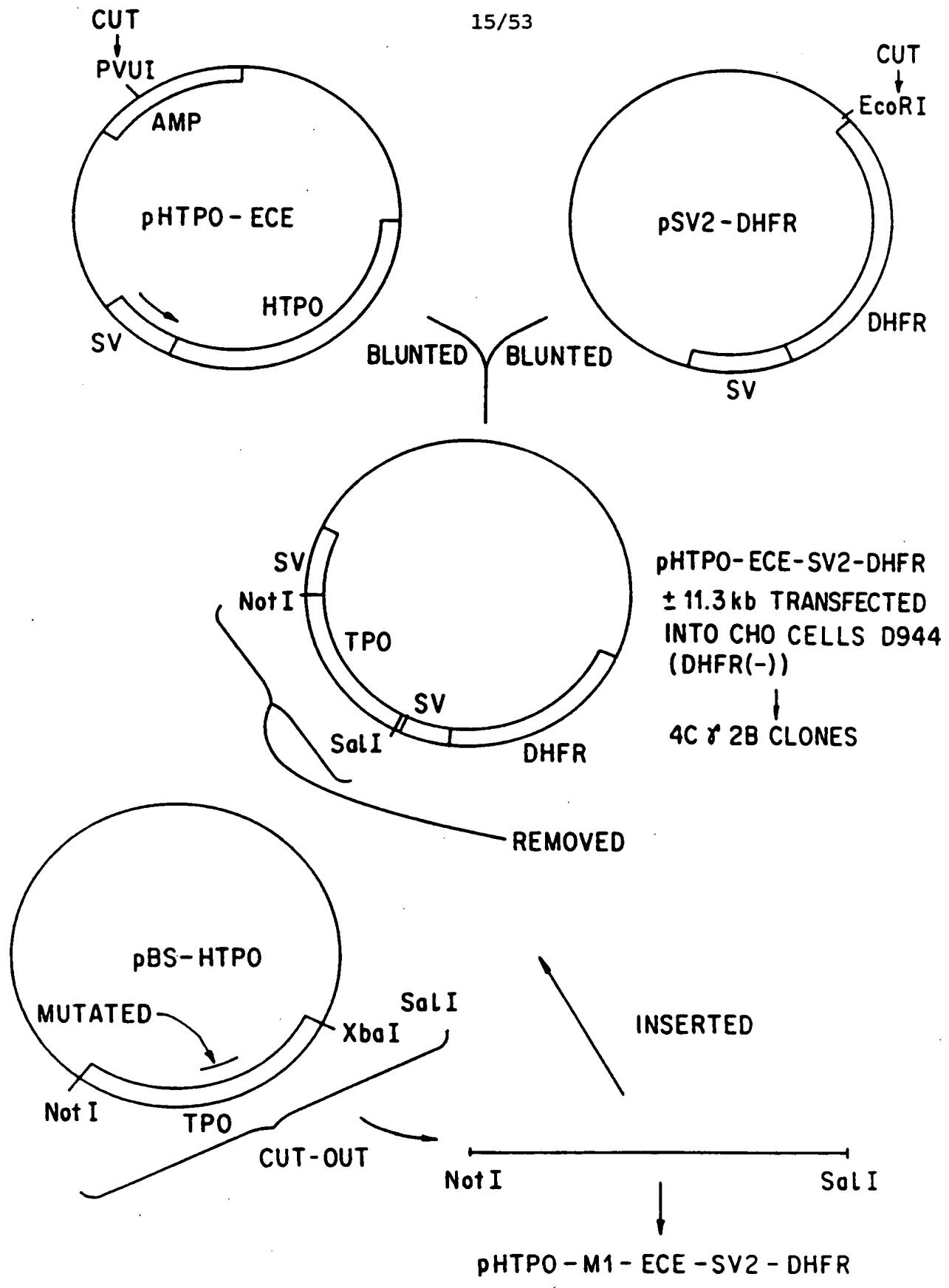


FIG. 9 SUBSTITUTE SHEET

HUMAN THYROID  
MICROSOMES

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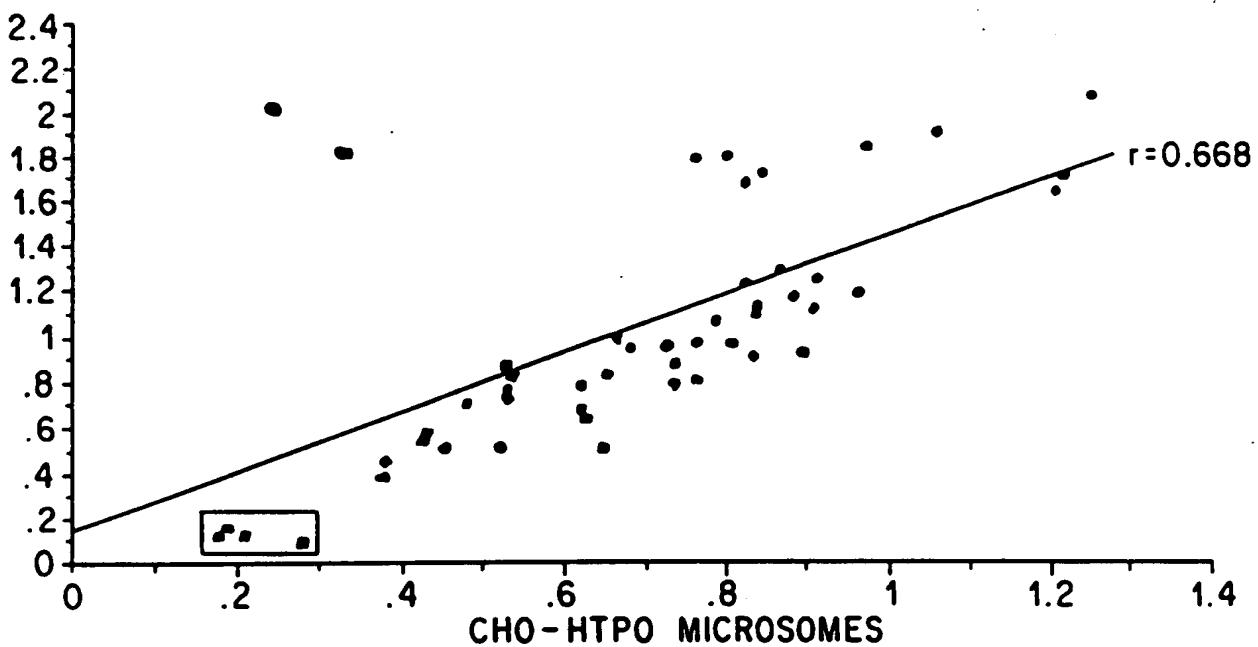


FIG. 10A

HUMAN THYROID  
MICROSOMES

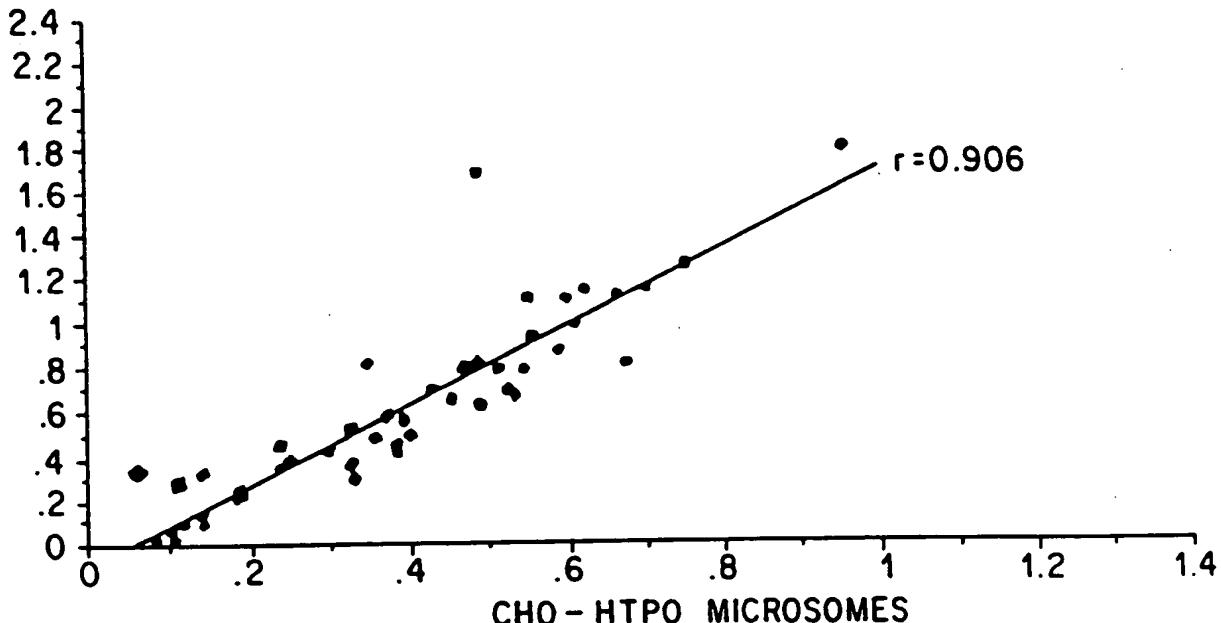


FIG. 10B

SUBSTITUTE SHEET

HUMAN THYROID  
MICROSOMES

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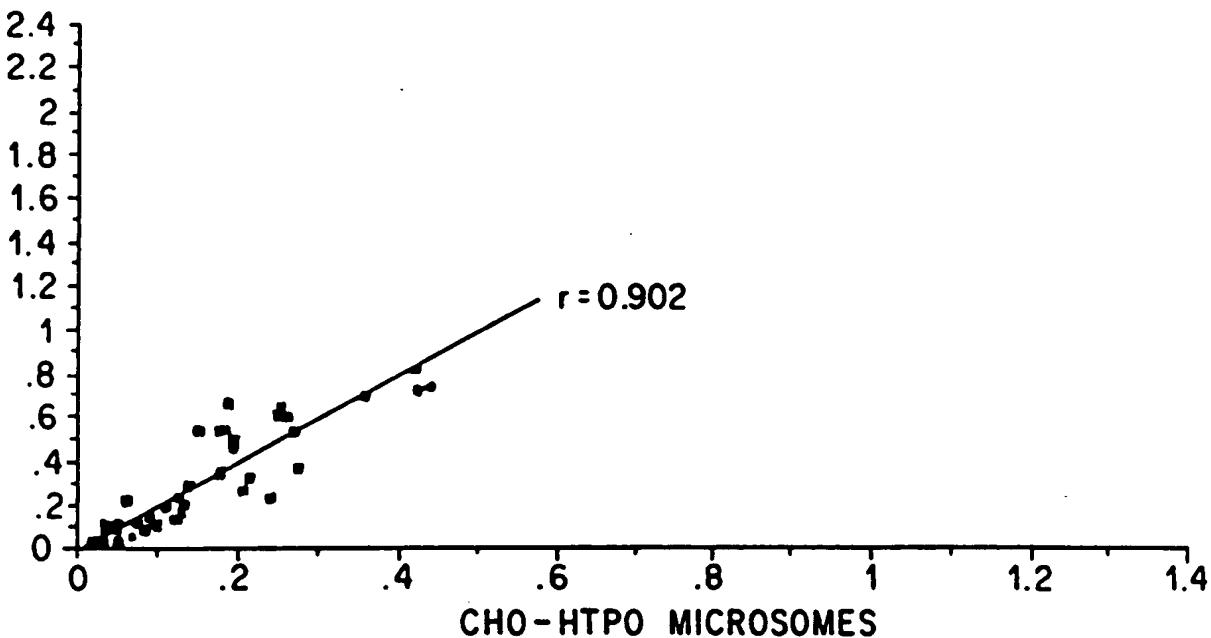


FIG. 10C

OPTICAL  
DENSITY

- SERUM 11
- SERUM 27
- SERUM 12
- SERUM 28

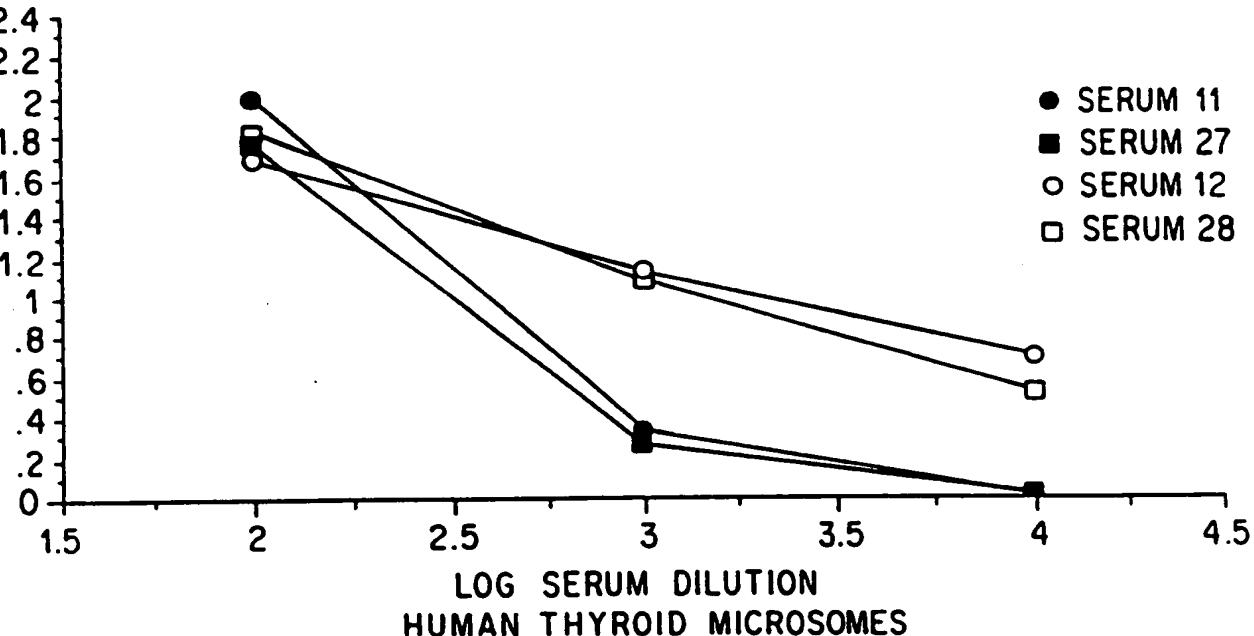


FIG. 11A

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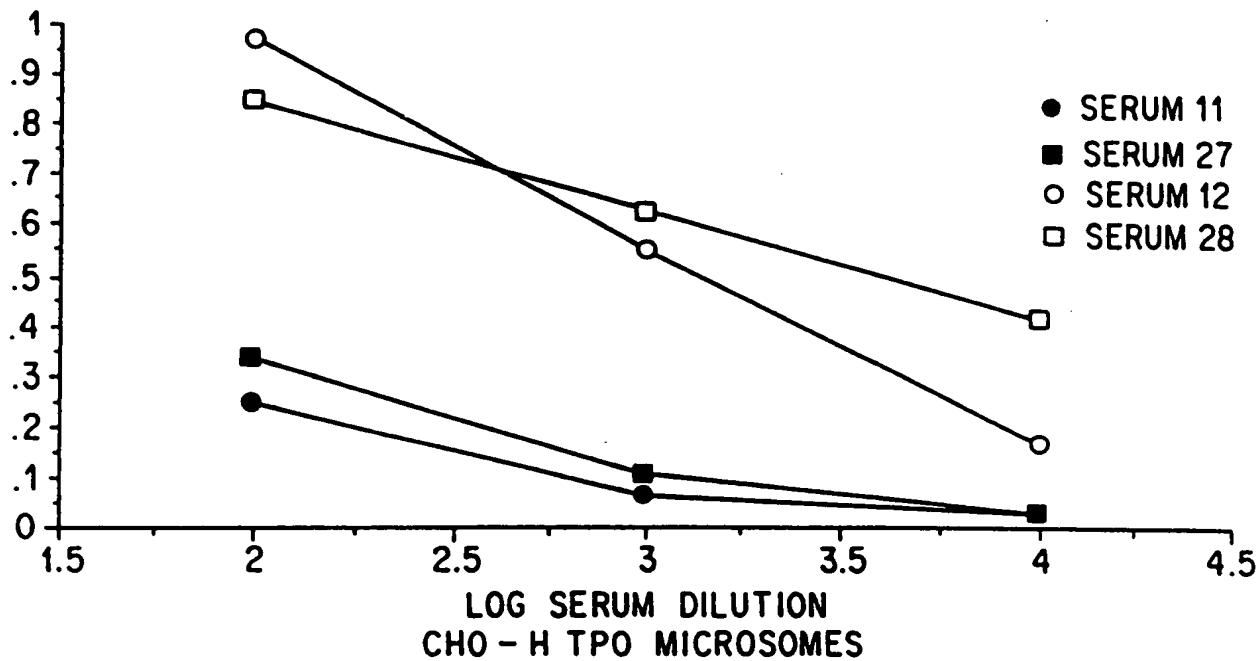
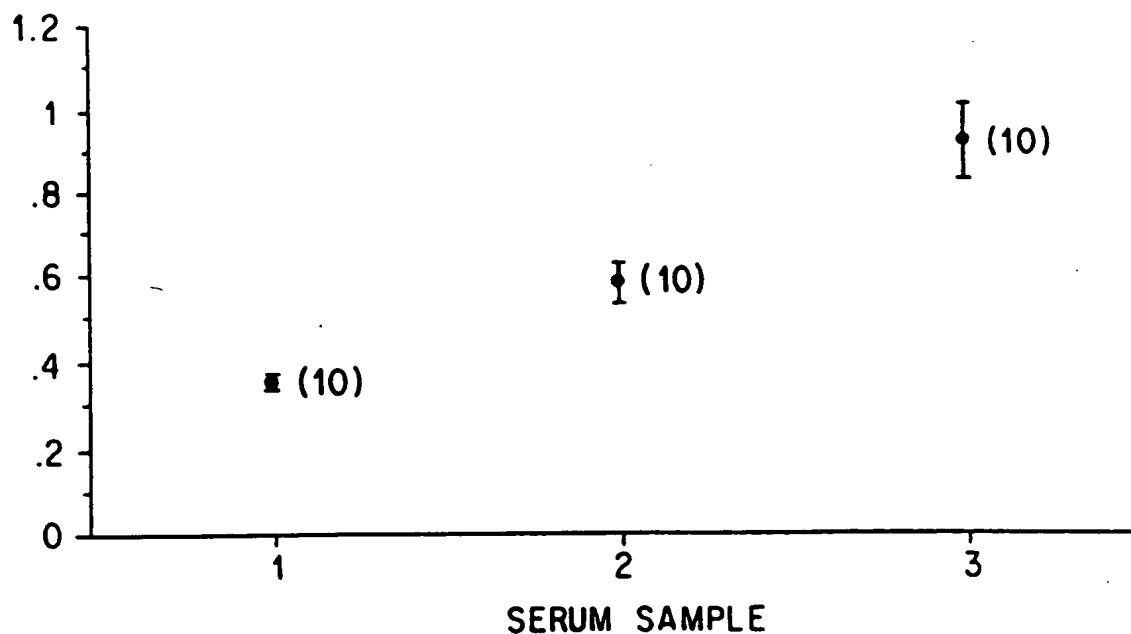
OPTICAL  
DENSITY

FIG. 11B

OPTICAL  
DENSITY  
(490 nm)

SUBSTITUTE SHEET

FIG. 12

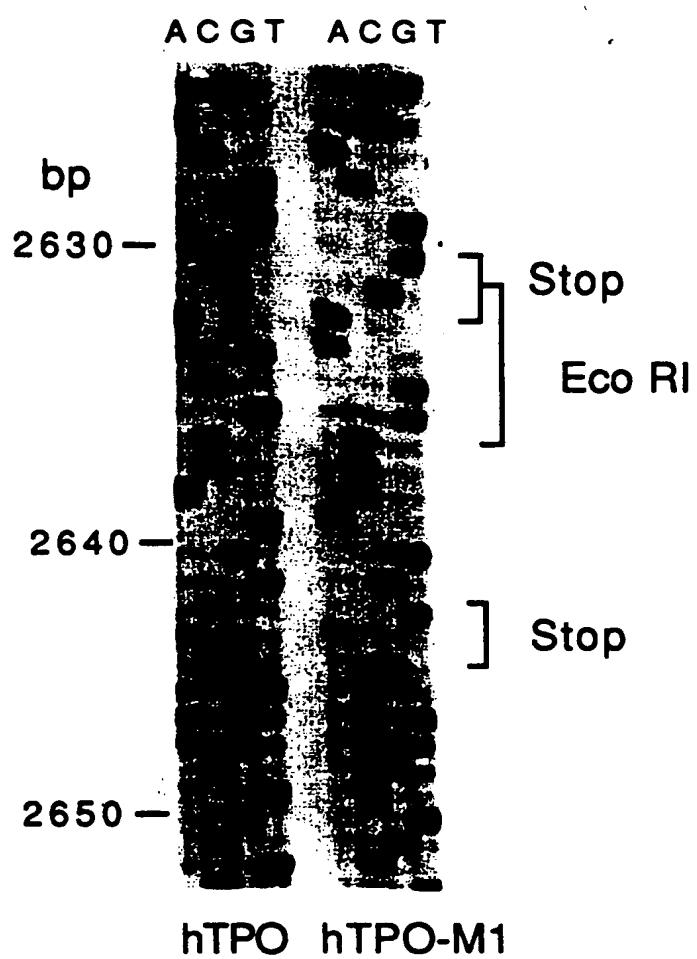


FIG. 13

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FIG. 14A

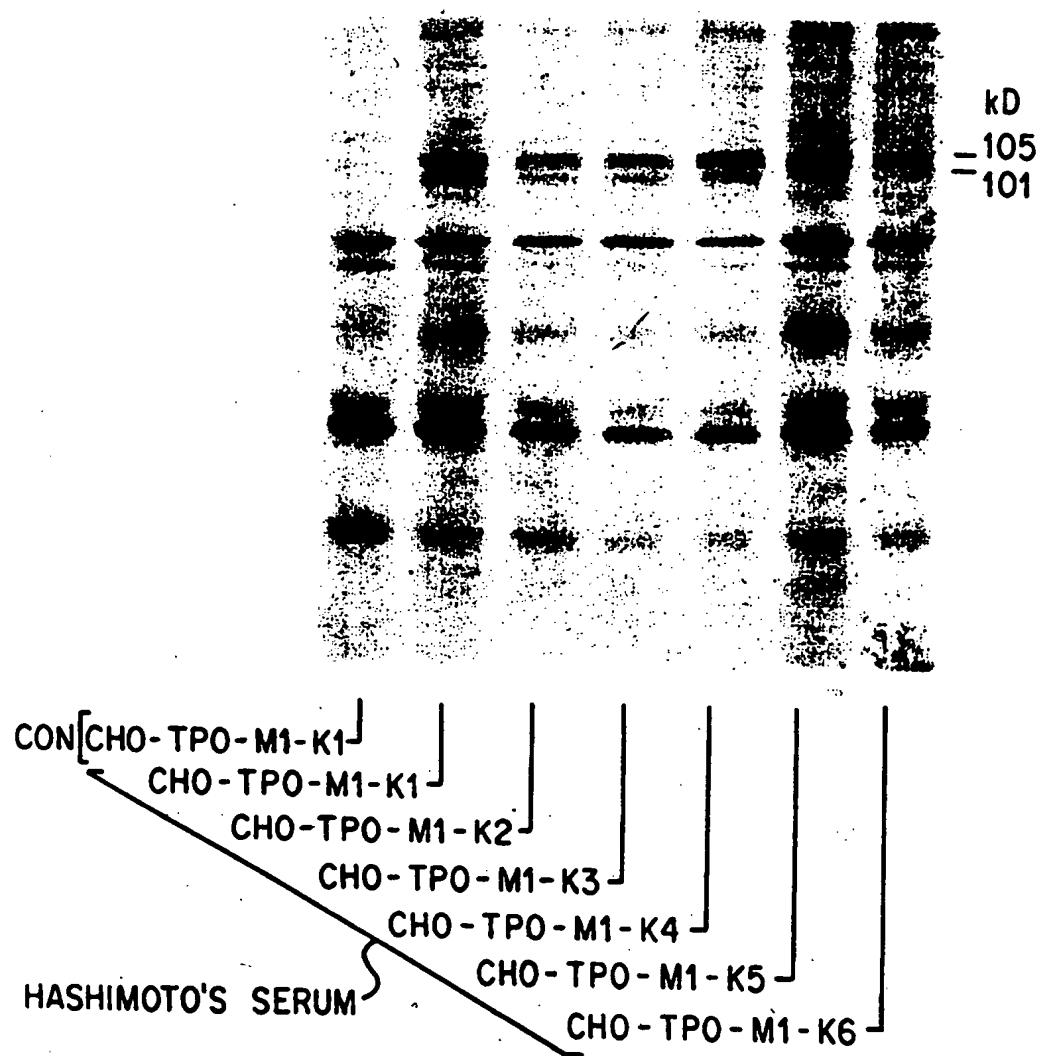
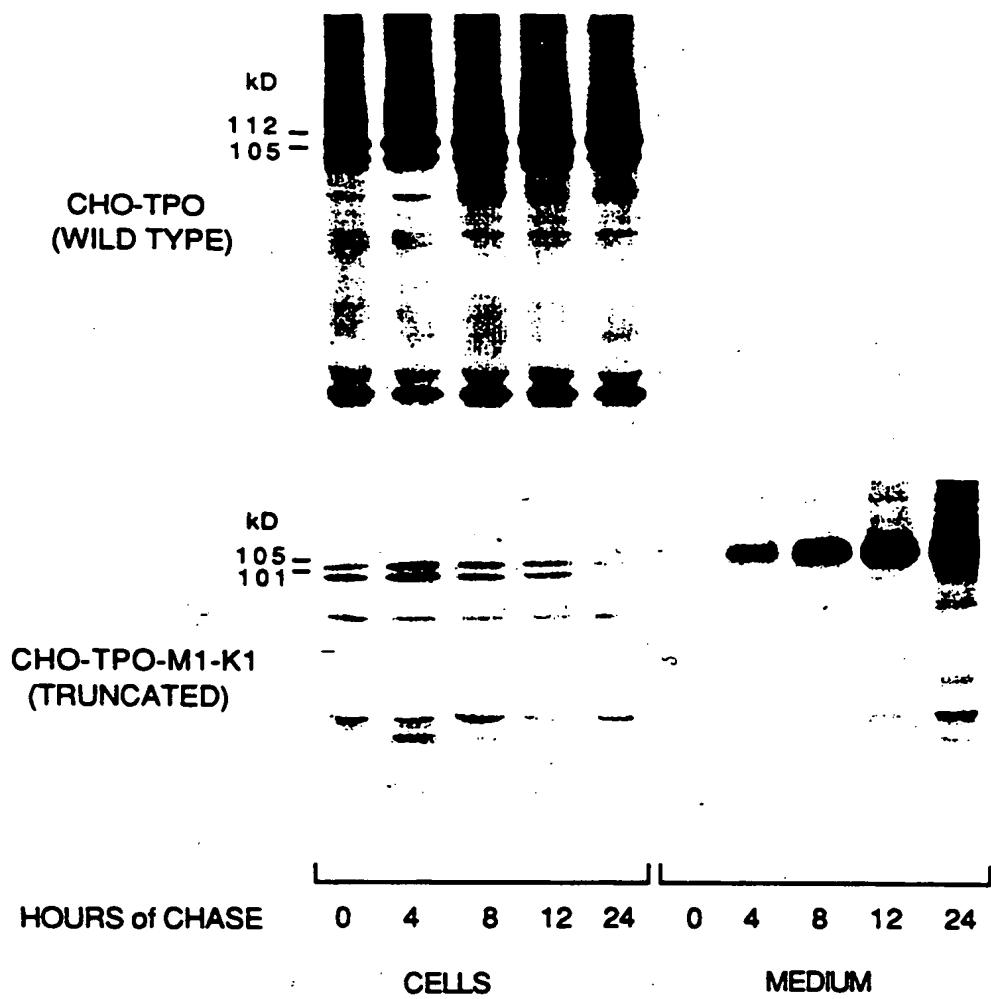


FIG. 14B

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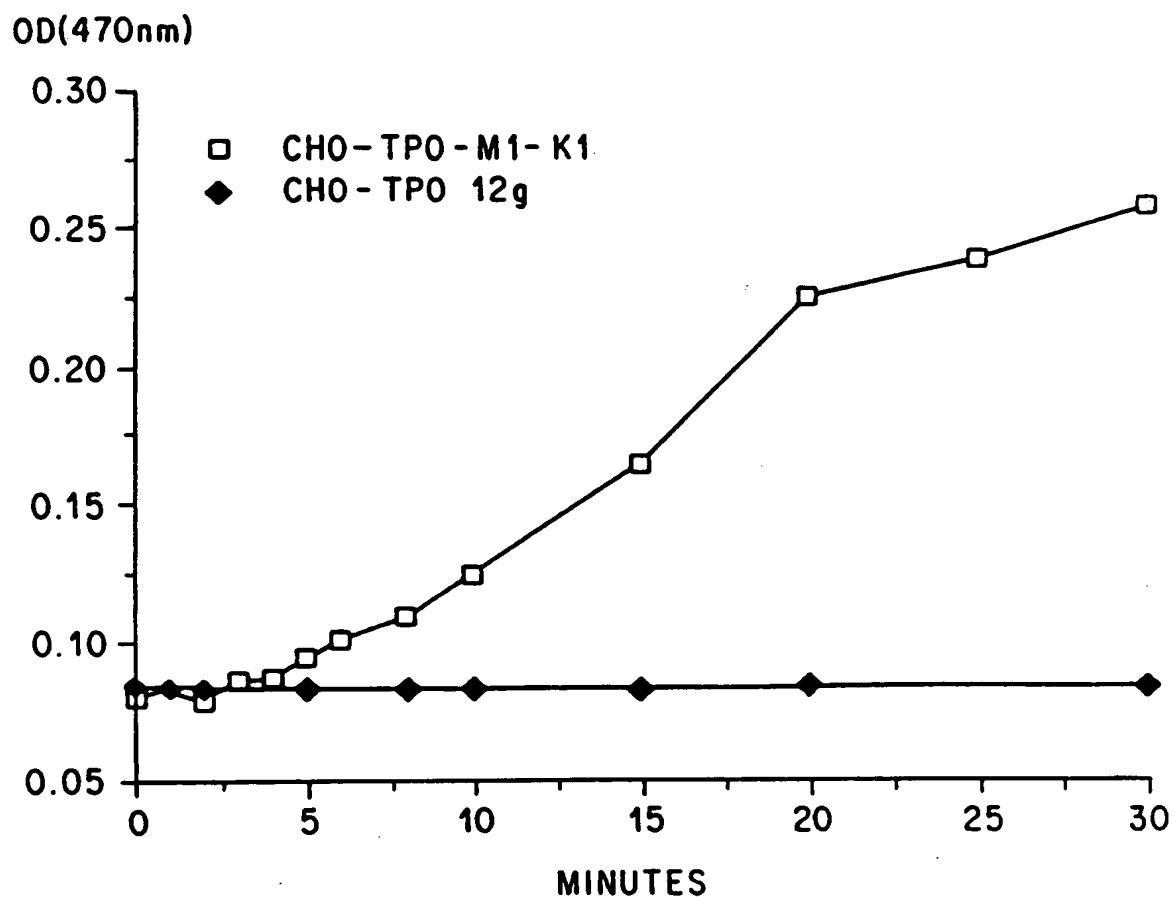


FIG. 16

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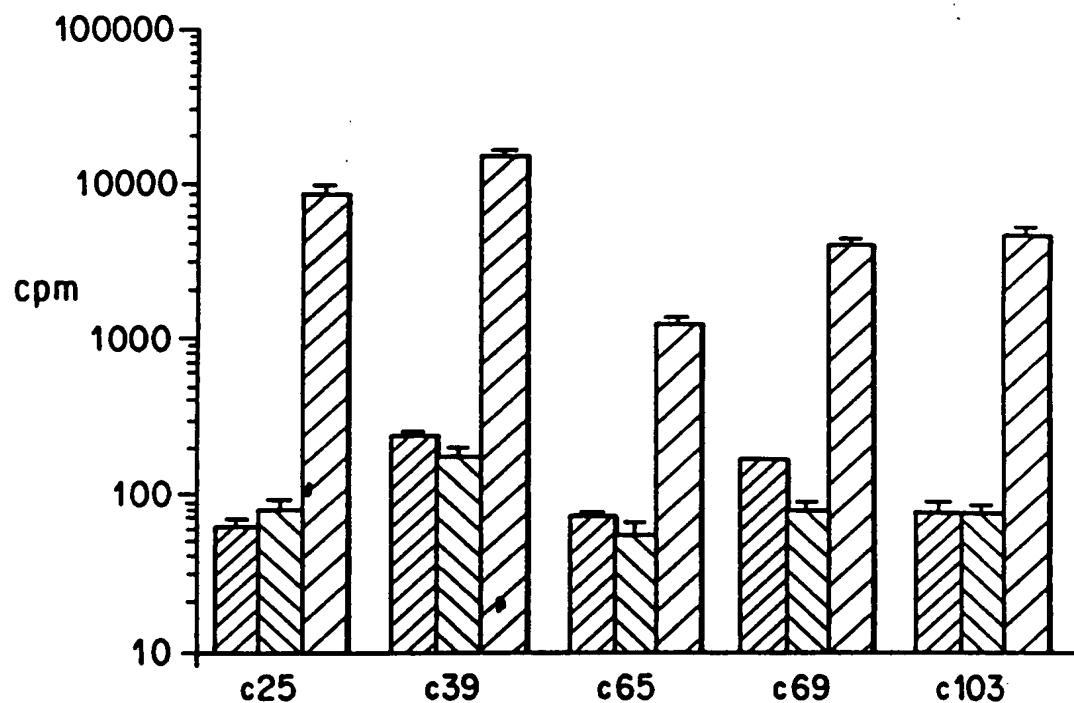


FIG. 17A

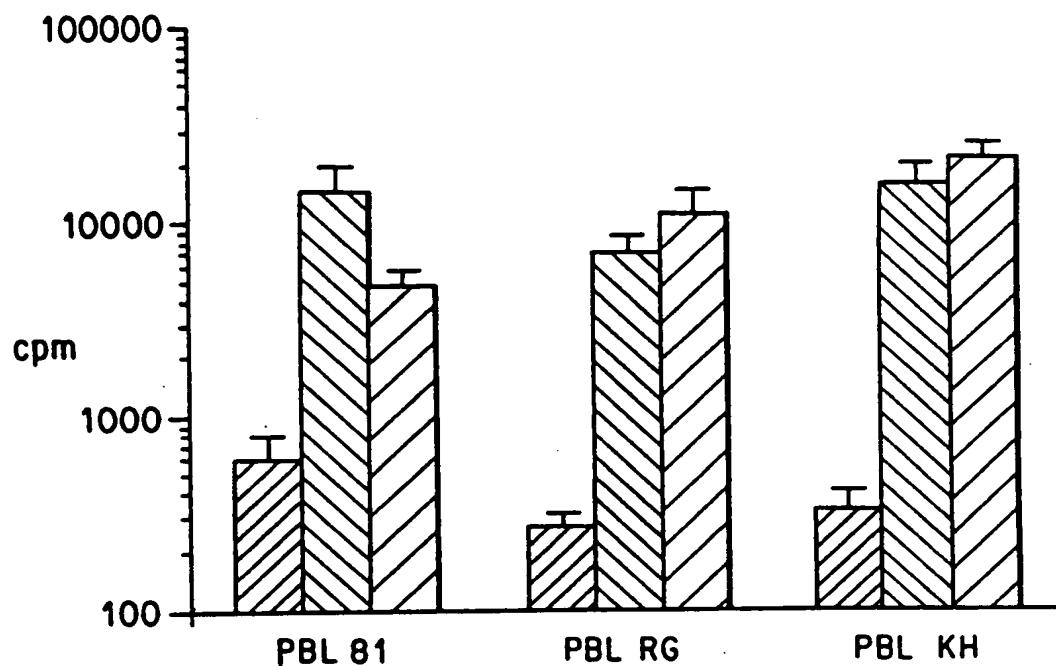
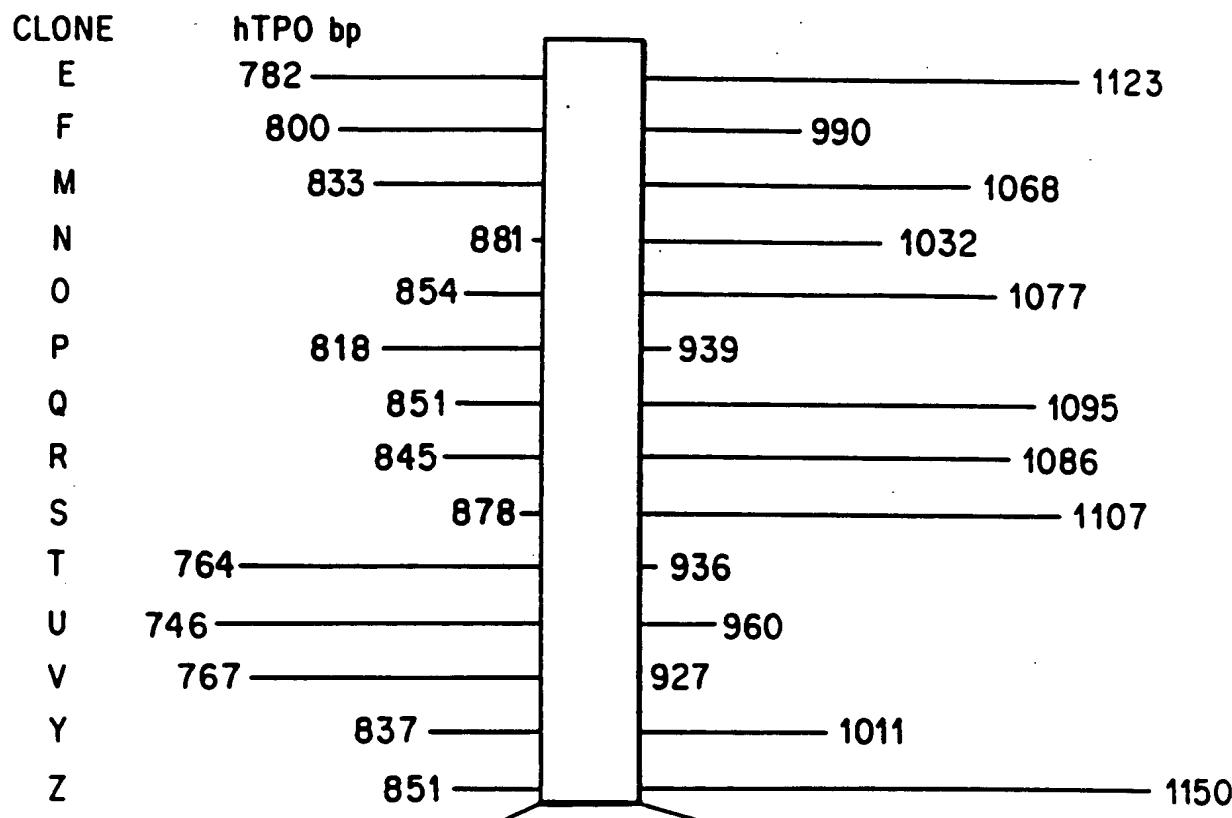


FIG. 17B

SUBSTITUTE SHEET

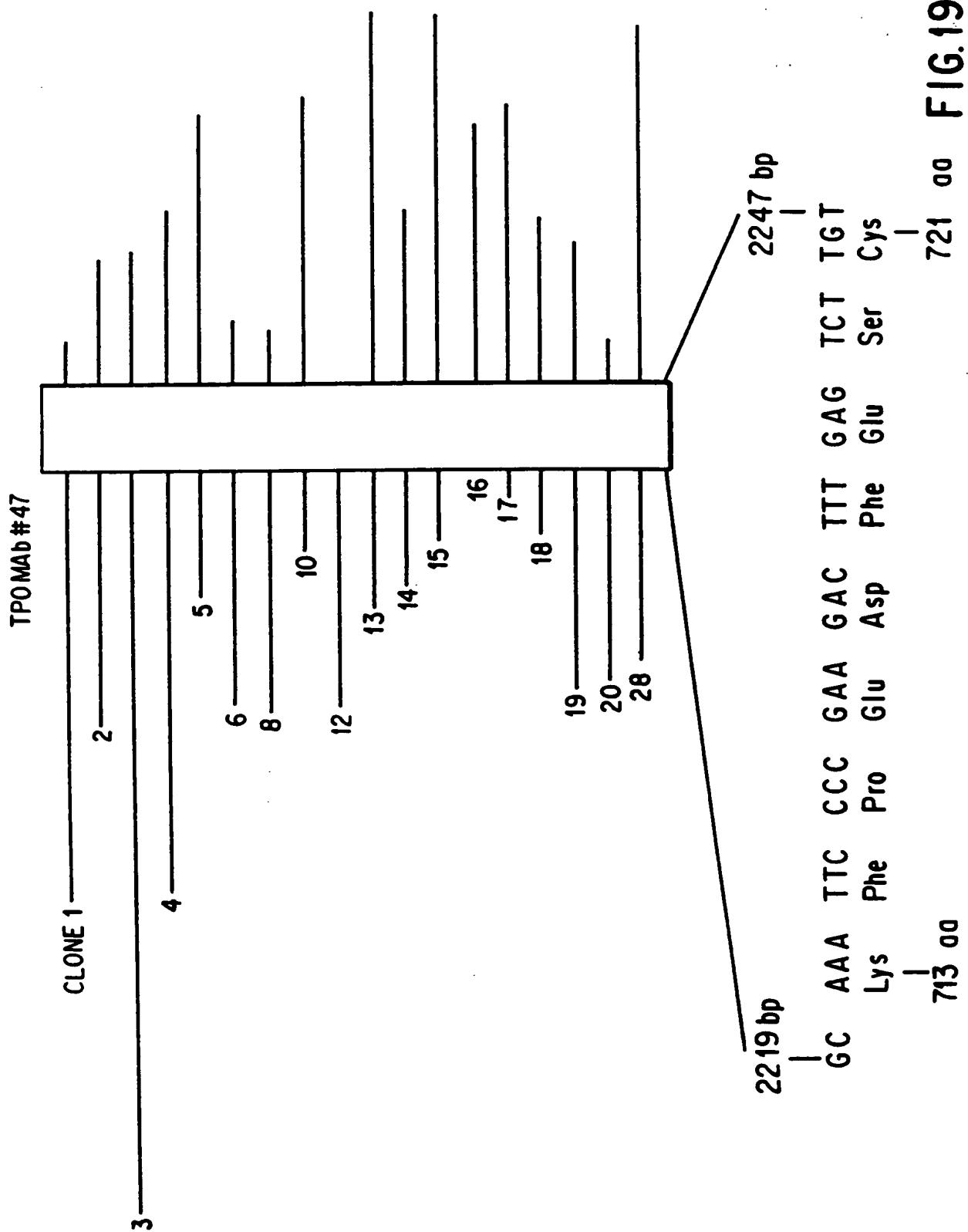
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NUCLEOTIDE  
883 AAC CCA TGT TTT CCC ATA CAA CTC CCG GAG GAG GCC CGG CCG GCC 927  
AMINO ACID  
266 Asn Pro Cys Phe Pro Ile Gln Leu Pro Glu Glu Ala Arg Pro Ala 281

FIG. 18

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FIG. 19

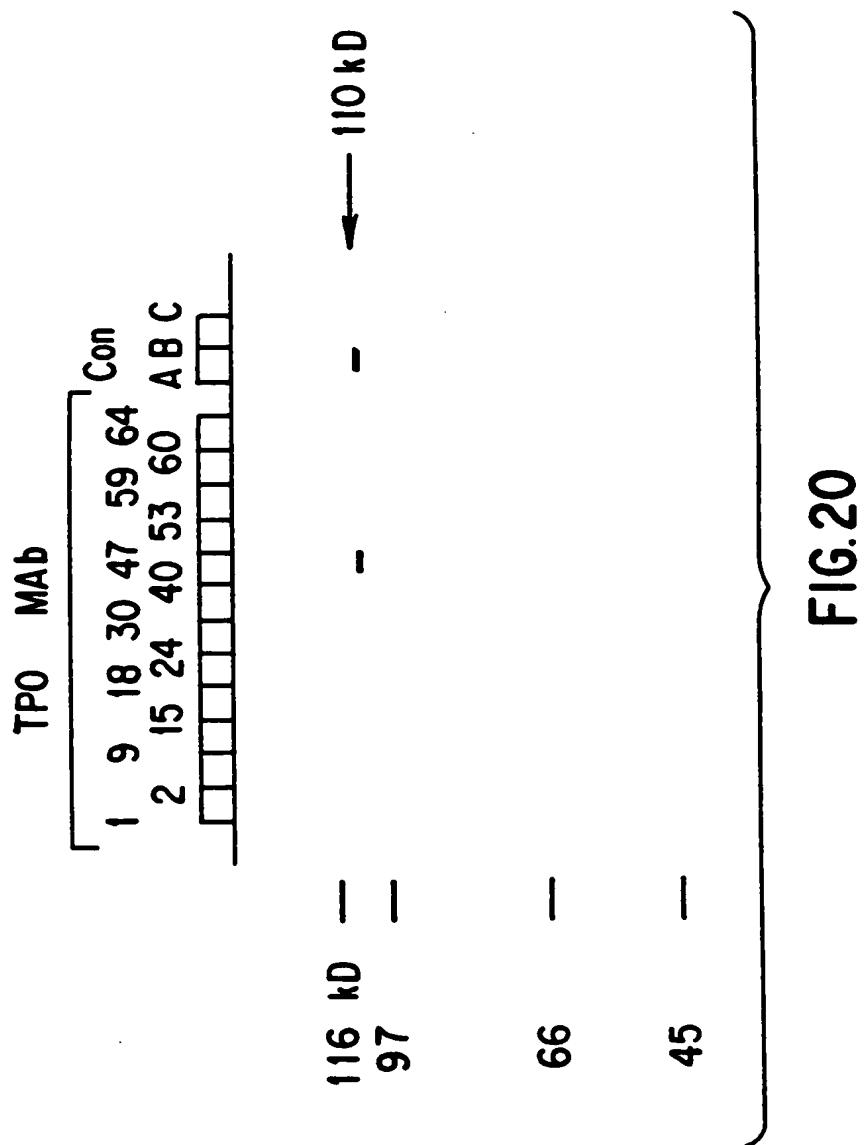


FIG. 20

SUBSTITUTE SHEET

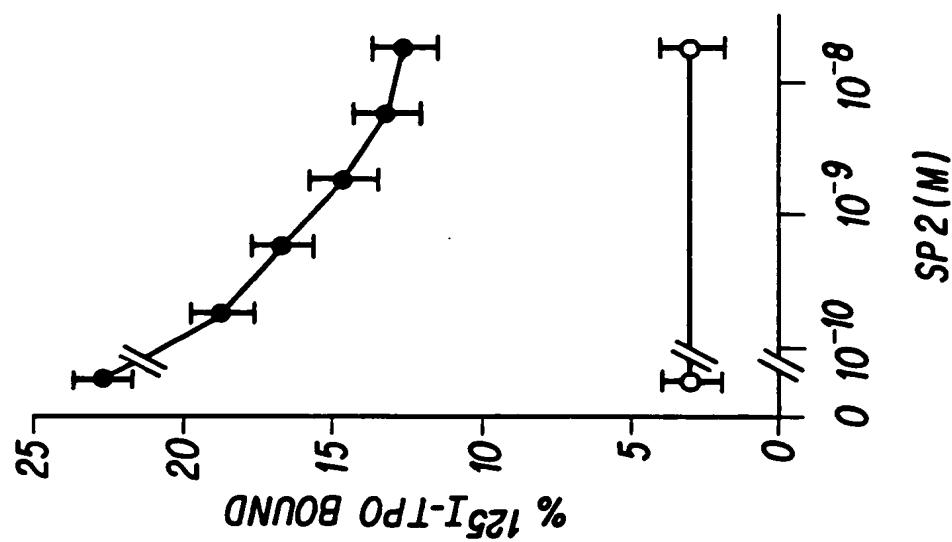


FIG. 28

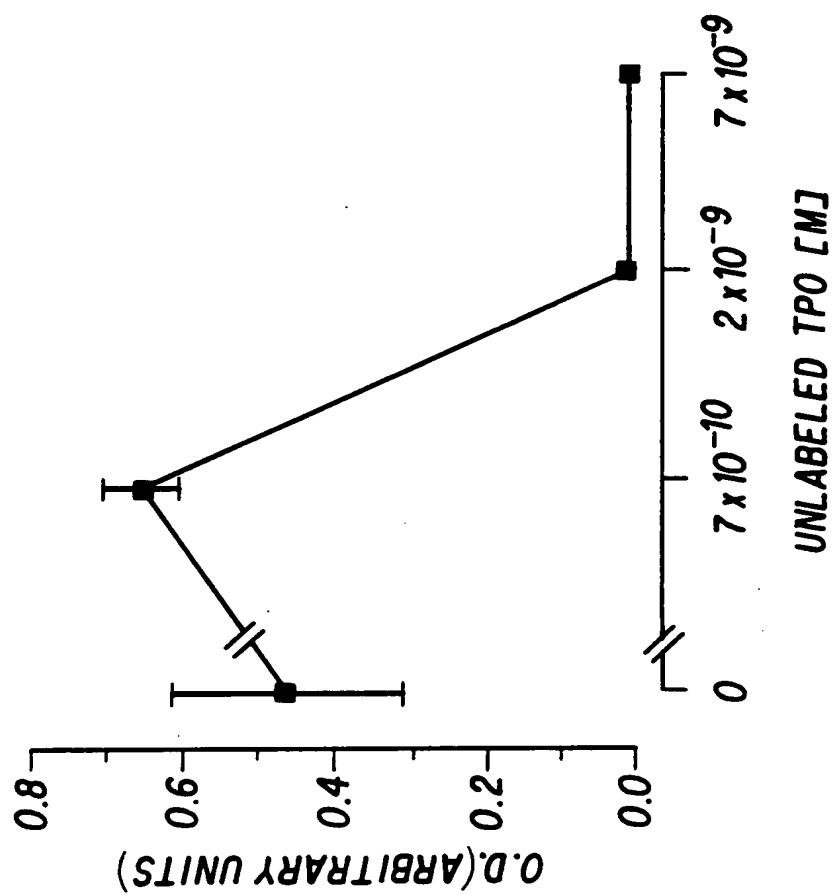


FIG. 21

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VH SEGMENT (VH1)

**SP2**      Q V K L L E S G A E V K K P G A S V K V  
 1-1      CAGGTGAAACTGGTCTGAGTCCTGAGCTGAAGAACCTGAGGTC 60

CDR1

**SP2**      S C K A S G Y T F T G H Y M H W V R Q A  
 1-1      TCCTGGAAAGGCTTCTGGATAACACCTTCACCGCCCACTATGCACTGGGGTGCAGGCC 120

CDR2

**SP2**      P G O G L E W I G W I S P N R G A T R F  
 1-1      CCTGGACAAAGGCTTGAGTAGGATGGATCAGGCCCTAACAGGGTGCACAAAGGTTA 180

\*\*\*\*\*

**SP2**      A Q K F Q G R V T M T S D T S I N T V Y  
 1-1      GCACAGAGTTCTGGGGCTGAGGTCAACCATGACCGCCATTAACAGTCTAC 240

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**SP2**      M E L S G L R F D T A V Y C A T  
 1-1      ATGGAGCTGAGGGCTGAGATTGACCAACGGCCGATGATTACTGTGCAGCA  
               AAG-----C-----C-----G-----G-----

**FIG. 22***Cancel  
F*

D SEGMENT      CDR3

\*\*\*\*\*  
T R T A Y Y G M D  
SP2 ACACGGCACGGCCTTACCTACCGGATGGAC

JH SEGMENT (JH3)

R L G P R D H G H R L F  
SP2 GTCTGGGCCAAGGGAUCCACGGATCAACCCTCTCTCA  
JH3 ATGCCTTTGAT-----A-T-----

FIG. 22 (CONT.)

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*Cancel  
Per  
F*

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VL SEGMENT (VK1)

E L V M T Q S P S S L S A S E G D T V T  
**SP2** GAGGCTCGTGAATGACCCAGTCTCCATCTCTGTCTGCATCTGAGGACACAGTCACC  
**KLVJ** ---CA---CA-----C-----C-----TA-----G-----  
**SP2** I T C R A S E N I S R Y S N W Y Q Q Q P  
**KLVJ** ATCACTTGCCGGAACTGAGAATTAGGCCAGGTATTCAATTGGTATTCAGGCAACCCA  
**SP2** G K A P K L L I S A A S T L Q S G V P S  
**KLVJ** GCGGAAAGCCCTAAACTCCATCTGCTGCATCCACTTTACATGAGGTGGGTCCCACCA  
**SP2** R F S G S G T H F T L T I N S L Q P  
**KLVJ** AGATTCAGTGGCAACTGCACTGGGACACATTTCACTCTCACCATCACAGTCACCCCT

## CDR1

\*\*\*\*\*

**SP2** I T C R A S E N I S R Y S N W Y Q Q Q P  
**KLVJ** ATCACTTGCCGGAACTGAGAATTAGGCCAGGTATTCAATTGGTATTCAGGCAACCCA  
**SP2** G K A P K L L I S A A S T L Q S G V P S  
**KLVJ** GCGGAAAGCCCTAAACTCCATCTGCTGCATCCACTTTACATGAGGTGGGTCCCACCA  
**SP2** R F S G S G T H F T L T I N S L Q P  
**KLVJ** AGATTCAGTGGCAACTGCACTGGGACACATTTCACTCTCACCATCACAGTCACCCCT

## CDR2

\*\*\*\*\*

**SP2** I T C R A S E N I S R Y S N W Y Q Q Q P  
**KLVJ** ATCACTTGCCGGAACTGCACTGGGACACATTTCACTCTCACCATCACAGTCACCCCT  
**SP2** G D F A T Y Y C Q Q T Y S S P F  
**KLVJ** GGAGATTTGCAACTTACTACTGTCAACAGACTTACAGTTCACCGTTC  
**SP2** T F G Q G T K L E I K R T  
**KV312** ACTTFTGGCCAGGGGACCAAGGCTGGGACATCAACGAAACT

J SEGMENT (JK2)

*Cancel*  
*for*  
*T*

T F G Q G T K L E I K R T  
ACTTFTGGCCAGGGGACCAAGGCTGGGACATCAACGAAACT

FIG. 23

KLVJ	..CA.....	C...	.....	TA.....	50
VK-SP2	..GC.....	T...	.....	AG.....	50
VK-SP4	..GC.....	C...	.....	TG.....	50
VK-SP5	..GC.....	C...	.....	TA.....	50
Consensus	GA--TCGTGA	TGACCCAGTC	TCCATC-TCC	CTGCTGCAT	CTG--GGAGA

KLVJ	..G.....	C...	.....	C.	..GCA..A.T.AC....T..	100
VK-SP2	..C.....	C...	.....	G.	..ATA..A.C.GG...C..	100
VK-SP4	..G.....	C...	.....	C.	..CCG..G.C.CC...T..	100
VK-SP5	..G.....	G...	.....	C.	..ACA..G.C.AA...T..	100
Consensus	CA-AGTCACC	ATCA-TTGCC	GGGCAAGT-A	GA---TT-G-	A--TATT-AA	100

\*\*\*\*\*  
CDR1  
\*\*\*\*\*

KLVJ	.....A	GA.A.....A.....	.....A.G.....A.GC.	150		
VK-SP2	.....A	GC.A.....A.....	..A.A.....G..C.C.GC.	150		
VK-SP4	.....A	AA.A.....G.....	..A.A.....C..C.A.AC.	150		
VK-SP5	.....G	GA.G.....A.....	..G.G.....G..A.A.GG.	150		
Consensus	ATTGGTATC-	GCA--A-CCA	GGG-AAGCCC	CT-A-CTCCCT	-AT-T-T--T	150

\*\*  
\*\*

FIG. 24

*Cancel per*  
*X*

KLVJ            G.....G..     G.....  
 VK-SP2        G.....C..     A.....  
 VK-SP4        G.....C..     G.....  
 VK-SP5        A.....C..     G.....

**Consensus**

-CATCCA-TT T-CAAGTCGG GGTCCCCATCA AGGTTCAG-G GCAGTGG-TC 200  
 \*\*\*\*\*

KLVJ            G.....G..     G.....  
 VK-SP2        G.....C..     A.....  
 VK-SP4        G.....C..     G.....  
 VK-SP5        A.....C..     G.....

**Consensus**

-CATCCA-TT T-CAAGTCGG GGTCCCCATCA AGGTTCAG-G GCAGTGG-TC 200  
 \*\*\*\*\*

**CDR2**

KLVJ            G.....G..     G.....  
 VK-SP2        G.....C..     A.....  
 VK-SP4        G.....G..     G.....  
 VK-SP5        G.....G..     G.....

**Consensus**

TGGGACCA-AT TTCACTCTCA CCATCA-CAG TCTGCCAACCT G-AGATTTCG 250  
 \*\*\*\*\*

KLVJ            G.....G..     G.....  
 VK-SP2        G.....C..     A.....  
 VK-SP4        G.....A..     CGTGT  
 VK-SP5        G.....A..     CGTGT

**Consensus**

CAACTTACTA CTGTCAACAG A-TTACAGT- CCC---  
 \*\*\*\*\*

**CDR3**

KLVJ            G.....G..     G.....  
 VK-SP2        G.....C..     A.....  
 VK-SP4        G.....A..     CGTGT  
 VK-SP5        G.....A..     CGTGT

KLVJ            G.....G..     G.....  
 VK-SP2        G.....C..     A.....  
 VK-SP4        G.....A..     CGTGT  
 VK-SP5        G.....A..     CGTGT

*Carrie  
Per  
F*

**FIG. 24 (CONT.)**

KLVJ	DI.....	.....S.S N.....	.....A	50
VR-SP2	....E..T..	...EN.S R.S...Q.	.....SA	50
VR-SP4	.....	....TVG T...	.E.....T	50
VR-SP5	.....	..S....N.G K...R...	....E....G	50

**Consensus**

ELVMTQSPPSS LSASVGDRVIT ITCRASQ.I. .YLMWYQQKP GRAPKLLIY.  
 \*\*\*\*\*  
 CDR1

\*  
 CDR2  
 \*  
 CDR3

KLVJ	...S.....	.....H .....	.....T..S.V	96
VR-SP2	....R.....	.....	....V	96
VR-SP4	.....	.....	....V	96
VR-SP5	.....	.....	....V	96

**Consensus**

ASTLQSGVPS RFSGSGSGTD FTLTISSLQP EDFATYYCQQ SYSTPP  
 \*\*\*\*\*  
 CDR2  
 CDR3

**FIG. 25**

J-KV312     ...T...T....G.....C....G...  
 JK-SP2     ...T...T....G.....C....G...  
 JK-SP4 / 5     ...G..C....A.....G....A...  
 Consensus     AC-TT-GGCC A-GGGACCAA G-TGGA-ATC AACGAACT  
 39            39            39            39

J-KV312     .....  
 JK-SP2     .....  
 JK-SP4 / 5     .....V...  
 Consensus     TFGQGTKLEI KRT  
 13            13            13            13

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**FIG. 26**

*Cancel per F*

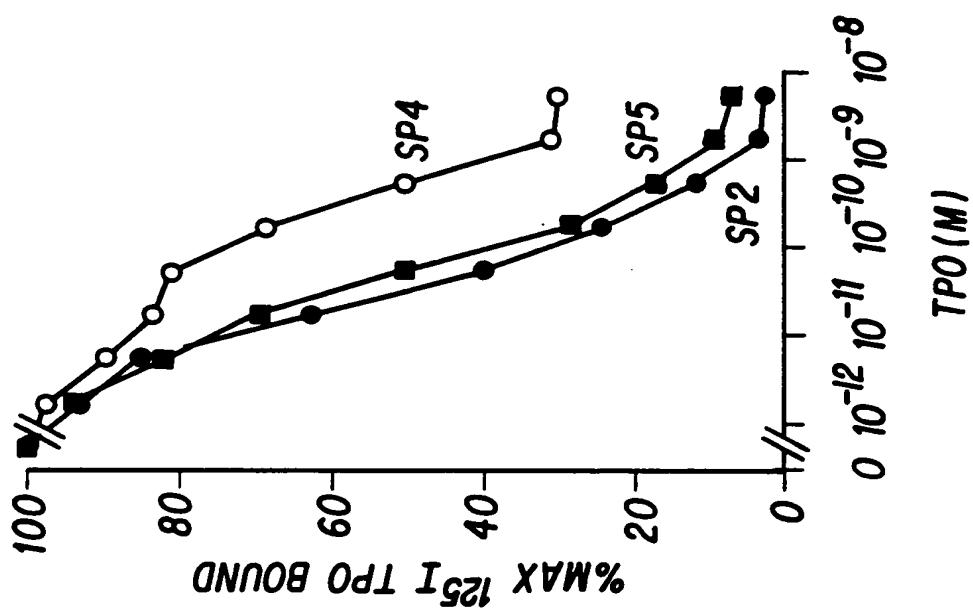


FIG. 27B

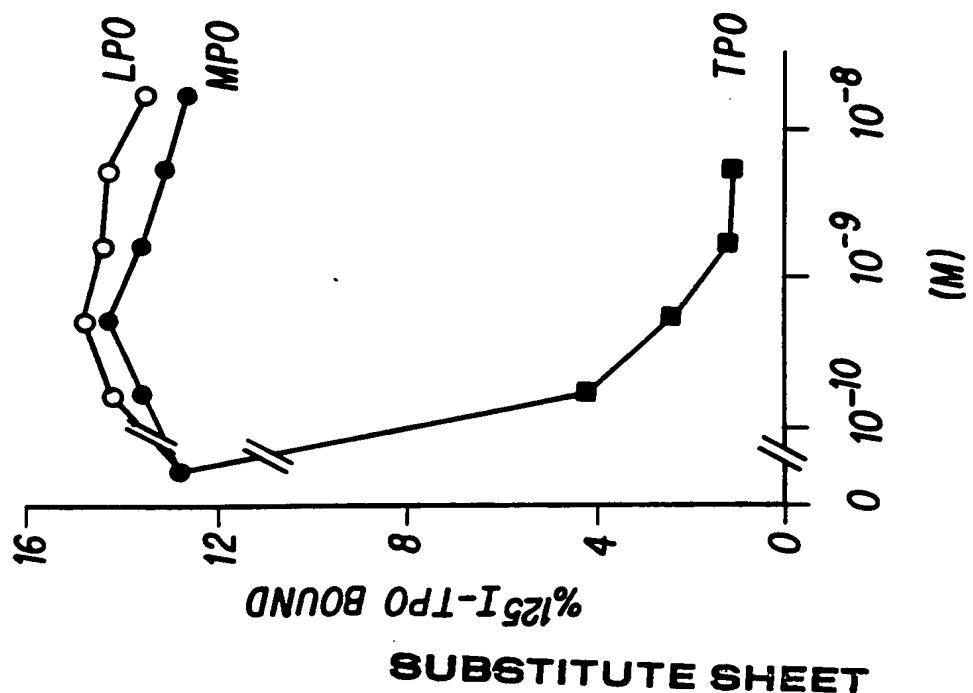


FIG. 27A

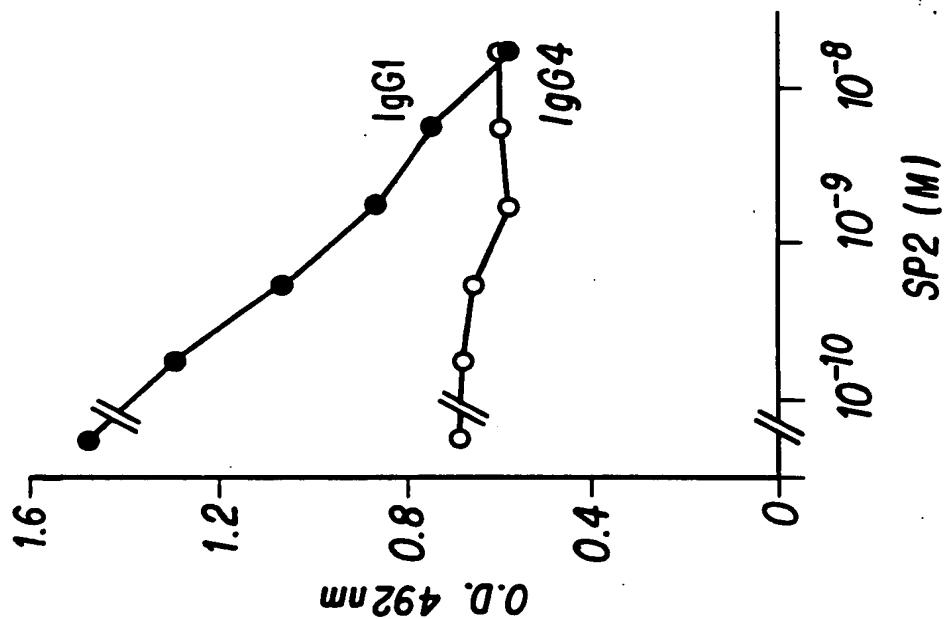


FIG. 29B

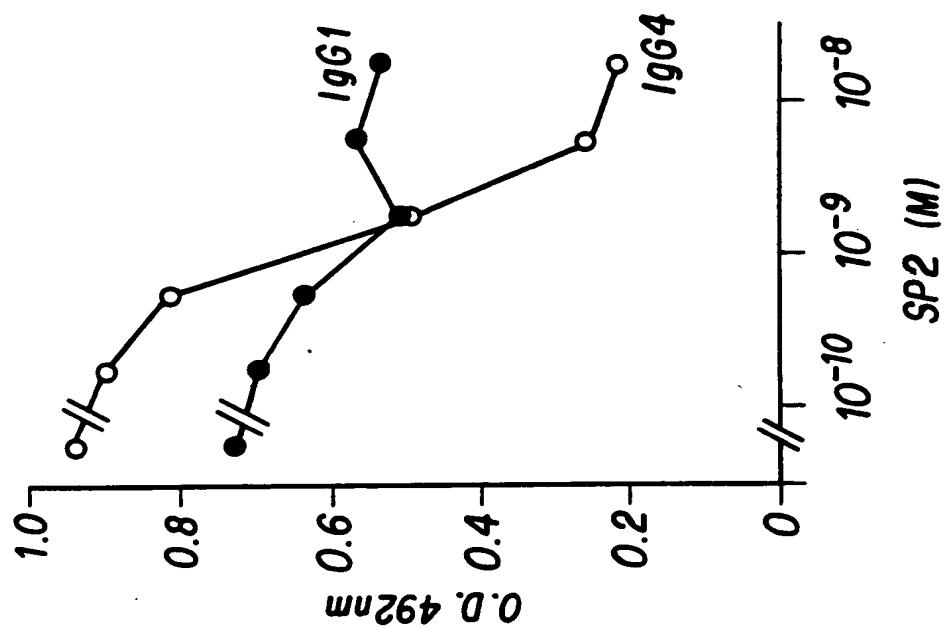


FIG. 29A

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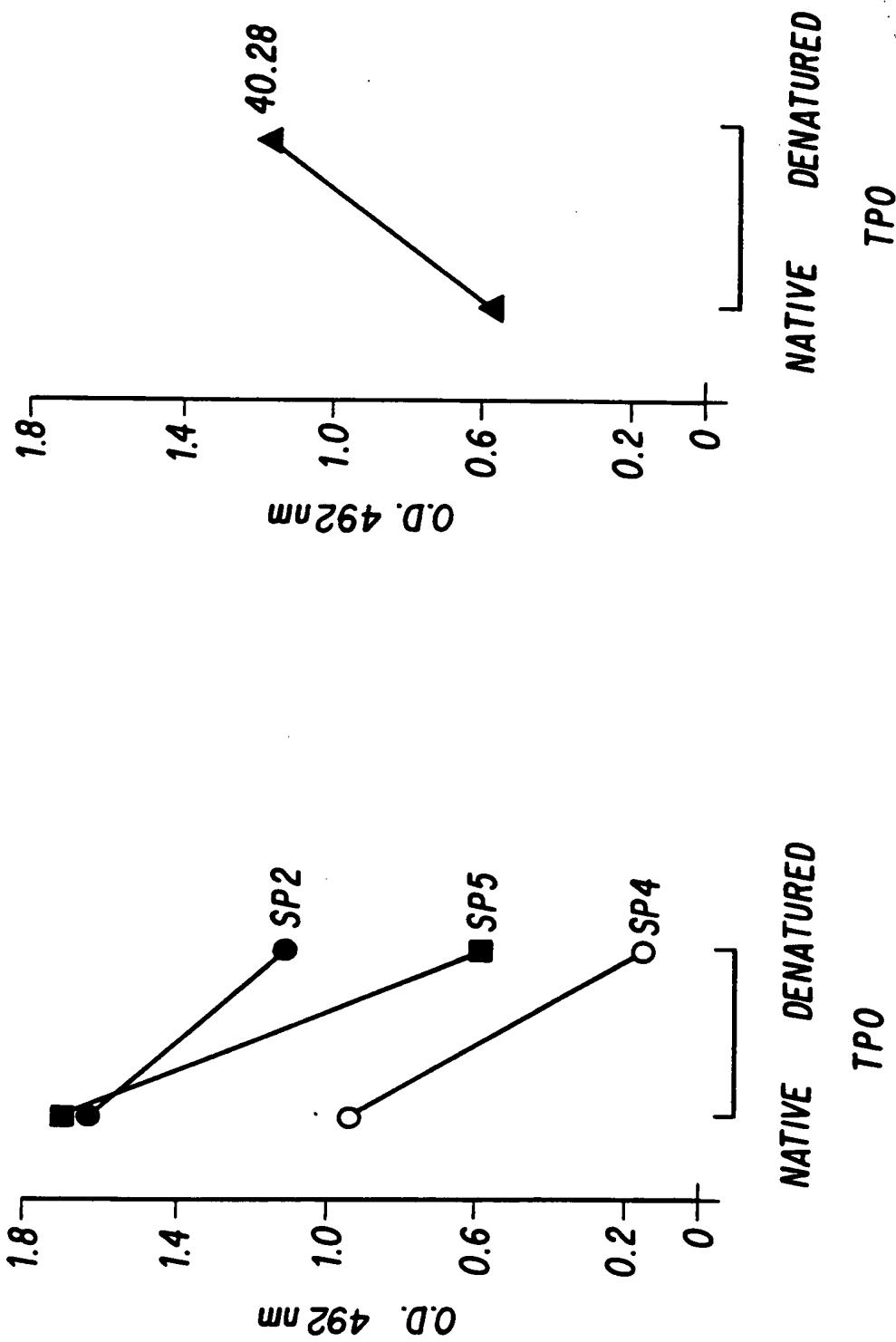


FIG. 30A

FIG. 30B

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**Consensus**

	CAGGTG-A-C	TG-T--AGTC	TGGGCTGAG	-TGAA-AA-C	CTGGGCCCTC	50
hv1L1	.....C.G.	...G.GC..	.....	G.....C..G.	.....	50
SP4 .6	....A.A..	..C.CG...	.....	T....G..C.	.....	50

**CDR1**

	AGTGA-GGTC	TCCTGCAAGG	CTTCTGCA-A	CACCTTCA-C	G-CTAC-AT-	00
hv1L1	....A....	....	....G.	....C.	....T..A	00
SP4 .6	....G....	....	....T.	....A.	....C..G	00

**Consensus**

	T-CACTGGGT	GGGACAGGCC	CCTGGACAAG	GGCTTGAGTG	G-TGGGATGG	150
① hv1L1	.....G.	.....	.....	.....A.	.....	150
② SP4 .6	.....T.	.....	.....	.....G.	.....	150

FIG. 31A

Cancel  
for

CDR2

Consensus	ATCAACCCTA A-A-TG-TGG CAC-A--TAT -C-CAGGAGT TGCACGGTAG	200
hv1L1	..... .C.G..G... .A.AC... G.A..... .G.....	200
SP4.6	..... .G.A..C... .G.GA... T.C.....	200

Consensus	GCTCACCATG ACCAG-GACA CG-CCATCAG C-CAGCCTA- ATGGAGCTGA	250
hv1L1	..... G..... T..... A..... C.....	250
SP4.6	..... A..... G..... G..... T.....	250

Consensus	-CAG-CTGA- ATC-GACGAC ACGGCCGT-T A-TACTGTGC G-GA	294
hv1L1	G...G...G...T.... G...T.... A...	294
SP4.6	C...C...A...G.... C...C.... C...	294

FIG. 31A (CONT.)

*Cancel per F*

**CDR1**

QV-L--SGAE	---	PGASV-V	SCKASG-TF-	-Y--HWVRQA	PGQQLEW-GW	50
..Q.VQ....	VNK.....	K.	.....D...T	G.YM.....	M.....	50
..K.LE....	LKN.....	R.	.....Y..N	D.HV.....	V.....	50

**CDR2**

INP---GT-Y	-QKFQGRVTM	TRDT-IS-AY	MEL--L-SDD	TAVYCAR	98
...MSG...N.	A.....	.....S..T..	...SR.R...	.....	98
...KNA..R.	S.....	....A..A..	...TS.K...	.....	98

FIG. 31B

**Consensus**

hv1L1	G	V	C	V	G	T	W	G	L
SP4 . 6	GGG	GTA	GCA	GTT	GGT	ACG	TGG	GCC	CTT

*Cancel per*

SP4 . 6

GGG GTC GCA GTT GGT ACG TGG GCC CTT  
 G V C V G T W G L

FIG. 31C

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per  
F

Consensus	CDR3	T	F	G	Q	G	T	K	L	E	I	K	R	?
SP # 21		.	.	P	.	R	V	.	V	.	.	J	K	?
14, 15, 22		.	.	.	.	.	.	E.	.	E.	.	JK2		
18		.	.	.	.	H	.	V	.	V	.	JK2		
20		.	.	.	.	H	.	V	.	V	.	JK1		
12		.	.	.	.	H	.	V	.	V	.	JK1		
13		.	.	.	.	.	.	.	.	.	.	JK2		
16		.	.	.	.	.	.	.	.	.	.	JK2		
17, 19		.	.	.	.	.	.	.	.	.	.	JK2		

FIG. 32B

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*Cancel  
for  
F*